Fanny Trotter
Ansted Wood

# AN ESSAY

ON

# THE EDUCATION OF THE EYE

WITH REFERENCE TO

# PAINTING.

Tommy Trower

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ILLUSTRATED BY COPPER PLATES AND WOOD CUTS.

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BY JOHN BURNET, F.R.S.

AUTHOR OF PRACTICAL HINTS ON PAINTING.

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"Visual impressions are those which in infancy furnish the principal means of developing the powers of the understanding; it is to this class of principles that the philosopher resorts for the most apt and perspicuous illustrations of his reasoning, and it is also from the same inexhaustible fountain that the poet draws his most pleasing and graphic as well as his sublimest imagery." DR. ROGET'S BRIDGEWATER TREATISE.

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TO

WILLIAM ALLAN, R. A.

MEMBER OF THE SCOTTISH ACADEMY,

AND

MASTER OF THE TRUSTEES ACADEMY

FOR ENCOURAGING THE ARTS AND MANUFACTURES OF SCOTLAND,

THIS ESSAY

Is Inscribed,

IN TESTIMONY OF THE

AUTHOR'S REGARD.

# PREFACE.

In prefacing a work of this brief description, where so many branches of the Art of Painting are introduced with little more than an enumeration of their component parts, I ought to apologise, in the first instance, for thus attempting to convey any information which can be carried into practical usefulness in so small a compass: my motive for so doing was to give, if possible, an insight into the intricacies of the Art, without distracting the attention of the reader by a multitude of examples, whose union often destroys the strong impression of a single illustration. Though the varieties of painting are endless, yet the properties of which these varieties are composed are, as in music, few in number; I have endeavoured, therefore, to notice only the leading principles which must be known, and which by reflection and observation can be extended to an infinite series of ramifications. The same simple rules which should regulate the instruction of beginners, I have endeavoured to point out as existing in the highest departments of the Art, communicating by their presence that value which a vein of gold imparts to a mass of inferior matter. To some it may appear that the subject is too physically treated. I have been actuated so to do by the custom of

the present time, and surely every one ought to know something of the construction of that instrument he is in possession of, and of its operations on the mind. In what I have advanced, I have quoted the opinions of the best authors to corroborate and strengthen my own, thereby hoping to render an Art by which civilized society is so highly embellished, more known and appreciated.

*March* 2, 1837.

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# AN ESSAY

ON

# THE EDUCATION OF THE EYE

WITH

# REFERENCE TO PAINTING.

In a country so largely connected with manufactures as this is, we cannot but wonder why the education of the eye has not been more generally cultivated; observing, as is also the case with the ear, that its education in after life rarely gives the possessor those advantages which result from a proper direction having been given in youth: nor do I see why drawing should not accompany the elements of reading and writing, the complicated forms of the letters in many languages presenting a more serious obstacle than what is required in the rudiments of drawing; and I have no doubt but that a very short time would be sufficient to enable a scholar to draw objects with tolerable correctness. Without this education, not only are the most valuable advantages often lost[1], but the mind is deprived of one

[1] Locke, whose attention was turned to this branch of education, says, "when he can write well and quick, I think it may be convenient not only to continue the exercise of his hand in writing, but also to improve the use of it further in drawing; a thing very useful to gentlemen on

of its chief sources of correct information, and the hand remains in a manner paralyzed and unable to record what the eye takes cognizance of; whereas when they advance in mutual contact through a course of early instruction this difficulty is overcome. This ready execution of the hand is to be acquired only by constant practice; for however readily the eye may perceive the form of an object, the power of delineating it on the paper or canvass is where the apparent difficulty lies, it is here where its correctness is put to the test; how much constant practice perfects this chain of communication between the eye and the hand, may be proved by the facility with which a person acquires the power of writing in the dark, or with his eyes shut. This quick communication, however, is not to be purchased at the expense of correctness, which ought to be the greatest consideration; for if the eye, or ear, falls into a loose, imperfect method of study, the student finds the greatest difficulty in getting rid of such unprofitable groundwork. In advocating the advantages of this branch of education, it is not my province to raise up chimeras, or what might be considered sufficient reasons for deferring it. Those who have the

several occasions, but especially if he travel, as that which helps a man often to express in a few lines well put together what a whole sheet of paper in writing would not be able to represent and make intelligible. How many buildings may a man see, how many machines and habits meet with, the ideas whereof would be easily retained and communicated by a little skill in drawing, which being committed to words are in danger of being lost, or at best but ill retained in the most exact descriptions? I do not mean that I would have your son a perfect painter; to be that to any tolerable degree will require more time than a young gentleman can spare from his other improvements of greater moment; but so much insight into perspective and skill in drawing as will enable him to represent tolerably on paper any thing he sees, may, I think, be got in a little time."—*Locke's Thoughts concerning Education.*

"With regard to the practice of drawing, it will be proper to incite the scholars to industry by showing in other books the use of the art, and informing them how much it assists the apprehension and relieves the memory, and if they are obliged sometimes to write descriptions of engines, utensils, or any complex pieces of workmanship, they will more fully apprehend the necessity of an expedient which so happily supplies the defects of language, and enables the eye to receive what cannot be conveyed to the mind any other way."—*Preface to the Preceptor.*

instruction of youth entrusted to them, I am confident would find it rather an assistance, as it might be given either as an amusement or as a reward of merit; and, in order to put it in the power of any master to instruct, I shall endeavour to proceed in the simplest manner, and with as few diagrams as the subject renders necessary.

## MEASUREMENT.

To teach the eye to measure the distance between one object and another ought to be the first proceeding; the forms of the lines which bound these spaces, the shapes contained or excluded by such lines ought to follow, for as the eye must have something tangible to work upon, it ought to be simple and evident. I should therefore commence by a series of dots or points, first two, then three, four, and five; also the angles made by drawing lines from each several point. A pair of compasses will enable any one to compare their correctness with the original, for until a pupil can accomplish pretty correctly these preliminaries, it is useless to hasten to more complicated matters.

*Fig.* 1.

## FORM.

All forms containing more or less portions of a triangle, square, or circle, the eye must be taught to comprehend and imitate such objects in their simple forms, in order to fit it for the purpose of seeing such qualities when mixed and combined with more complicated figures.

*Fig.* 2.

*Fig.* 3.

*Fig.* 4.

I would now recommend these forms to be cut out in paper, and viewed in various situations, being set upright, and also viewed in a horizontal position, that the eye may become thoroughly acquainted with the figures in all their variety of shapes, and with the causes of their alterations in form.

*Fig.* 5.

*Fig.* 6.

*Fig.* 7.

I would also recommend the pupil to draw from a cube and a ball, that the eye may become early accustomed to draw from the real objects, in place of flat surfaces, which will give him a power in drawing from nature unattainable by any other method.

## PERSPECTIVE.

Many have been deterred from attempting to learn Drawing from the dread of encountering so formidable a department of the art as Perspective; whereas, if it is stripped of its geometrical and mathematical intricacies, it will be found a very simple matter, and easy of comprehension[2]. Perspective, as the word denotes (being a compound of the

[2] "Long calculations or complex diagrams affright the timorous and unexperienced from a second view, but if we have skill sufficient to analyse them into simple principles, it will be discovered that our fear was groundless. *Divide* and *conquer* is a principle equally just in

Latin words *per*, through, and *specto*, to view), is the art of drawing the several objects as they appear when traced upon a glass, or transparent medium; the art of drawing in perspective, therefore, is nothing more than representing the various objects subject to those laws which regulate their appearance in nature[3].

science as in policy. Complication is a species of confederacy which, while it continues united, bids defiance to the most active and vigorous intellect, but of which every member is separately weak, and which may therefore be quickly subdued if it can be broken. The chief art of learning, as Locke has observed, is to attempt but little at a time; the widest excursions of the mind are made by short flights frequently repeated."—*Dr. Johnson.*

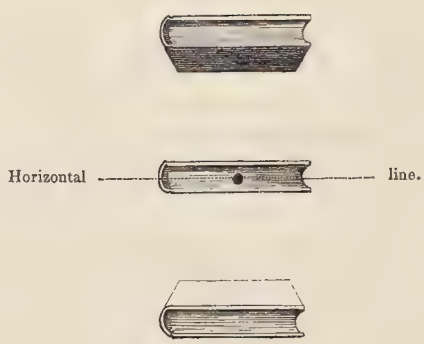
[3] "It was in the sixteenth century that *Perspective*, a new branch of optics, was revived, or rather invented; this is more a business of *geometry* than optics, and is indeed more an art than a science; but since it is derived from optical principles, and as the use of it is to give pleasure to the eye by a just representation of natural objects, I would do wrong not to give a short account of its rise and progress. The art of perspective owes its birth to painting, and particularly to that branch of it which was employed in the decorations of the theatre, where landscapes were principally introduced, and which would have looked unnatural and horrid if the size of the objects had not been pretty nearly proportioned to their distance from the eye. We learn from Vitruvius that Agatharchus, instructed by Eschylus, was the first who wrote upon the subject, and that afterwards the principles of this art were more distinctly taught by Democritus and Anaxagoras, the disciples of Agatharchus. Of the theory of this art, as described by them, we know nothing, since none of their writings have escaped the general wreck that was made of ancient literature in the dark ages of Europe. However, the revival of painting in Italy was accompanied with a revival of this art. The first person who attempted to lay down the rules of perspective was Pietro del Borgo, an Italian. He supposed objects to be placed beyond a transparent tablet, and endeavoured to trace the images which rays of light emitted from them would make upon it; but we do not know what success he had in this attempt, because the book which he wrote upon the subject is not now extant. It is, however, very much commended by the famous Egnazio Dante; and upon the principles of Borgo, Albert Durer constructed a machine, by which he could trace the perspective appearance of objects. Balthazar Perussi studied the writings of Borgo, and endeavoured to make them more intelligible; to him we owe the discovery of points of distance, to which all lines that make an angle of forty-five degrees with the ground line are drawn. A little time after, Guido Ubaldi, another Italian, found that all lines that are parallel to one another, if they be inclined to the ground line, converge to some point in the horizontal line, and that through this point also a line drawn from the eye, parallel to them, will pass. These principles put together enabled him to make out a pretty complete theory of perspective."—*Priestley's Optics.*

Since then the *Jesuits' Perspective, Brook Taylor's, Malton's*, and others, have rendered the most difficult and intricate diagrams clear and comprehensible.

## LINES.

All lines are subject to an alteration in their appearance, except two, a perpendicular line and a horizontal one; and lines are more or less diminished in length according as they depart from the parallel of the base line; for example, if a person holds a pen or a stick parallel with the eyes, and gradually turns it round, he will see it gradually become shorter, until it assumes a mere spot when it is placed with the point directly towards the eye, as it then covers what is termed the *point of sight*, being a point immediately opposite the observer's eye, and upon the horizontal line, which is always of the height of the eyes of the spectator; and as it is turned round it will describe innumerable points along the whole line; these are termed *accidental points*, and vary according as the lines run more or less at right angles from the base line. Lines also vary according as they are situated above or below the observer's eye; for instance, if a book is held up horizontally before the eye, the under cover will be seen when held above, and the lines of its sides appear to run

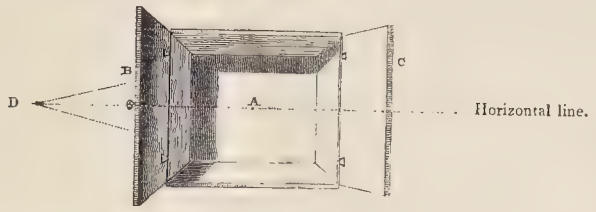
*Fig.* 8.




down to a point on the horizontal line. When underneath the eye, the upper cover will be seen, and the lines describing the sides appear to rise

up to the horizontal line[4]. Before proceeding further, for the better understanding the several lines already mentioned, and showing how they are affected, I shall give an explanatory figure.

*Fig.* 9.




The above represents a cupboard with folding doors: being placed immediately before the eye, the sides appear to rise and descend to the point of sight, A; also the door, B, from its being opened at right angles with the base line, while the lines of the door, C, appear to run to the accidental point, D; this point will vary its situation according as the door is more or less opened, which explains what are termed accidental points.

## DIMINUTION.

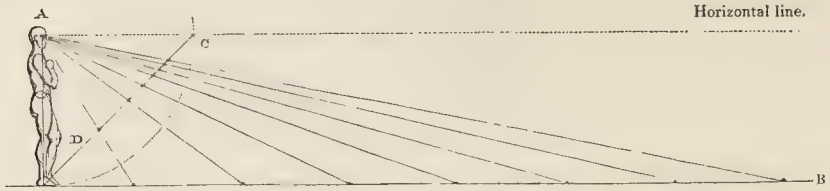
All objects diminish in size as the spectator departs from them, hence two parallel lines seem to approach each other as they recede from the eye; and this diminution will appear more or less sudden, according as they commence from a near point, or one more removed: for example, if the

[4] The truth of this may be also clearly proved if a person holds up a piece of glass on which a series of lines are drawn, radiating from the centre; for by looking through it either up a street, avenue, or long room, he will perceive those lines of the pavement, buildings, &c. which are at right angles with the base line, fall in with and cover many of the lines so drawn on the glass, for as they all run to the point of sight, they will of necessity converge, since the spaces between them diminish as they recede from the spectator.

hand is held near the eye, it will intercept a larger space than when held out at arm's length.

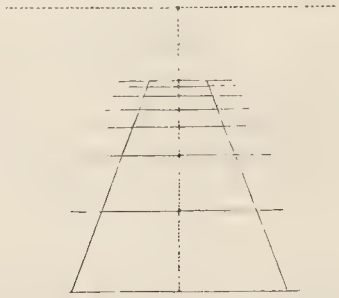
Objects diminish in an increased ratio until removed to a certain distance, when the diminution appears less violent; this may be made apparent by the following diagram.

*Fig.* 10.




Let the line A represent the spectator, and the line B represent a line of pavement, the circular line C, which cuts through the visual rays[5] as they approach the eye, will show the diminished ratio as the squares become more distant. And as they have to be represented upon a plain surface, their proportions will be as the divisions on D, they will therefore present the following appearance to the eye.

*Fig.* 11.



When, therefore, objects are commenced too near, they appear out of

[5] Imaginary lines reaching from various objects to the eye.

proportion with the other objects in the work, and though true according to rule, appear false, with regard to their effect upon the eye of the spectator. This is termed violent or sudden perspective, to avoid which a point of distance is chosen that will look agreeable. The breadth of the squares being determined by the diagonal line running to the point of distance where it cuts through the lines of the pavement, which run to the point of sight, the farther this point is removed the more level the ground will appear; as represented in *Fig.* 12.

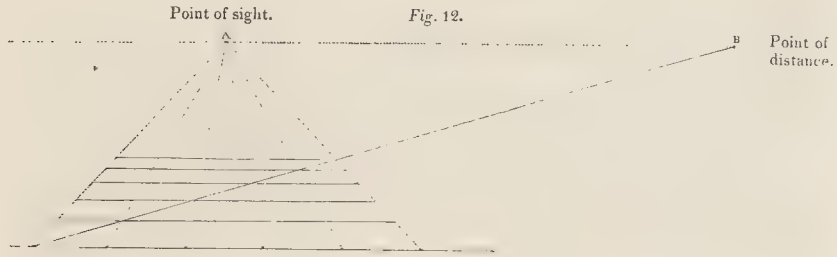


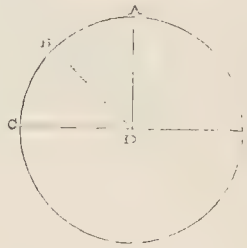

*Fig.* 12.

## ANGLES.

What we have hitherto said more immediately applies to parallel perspective; so named from all the lines which intersect those running to the point of sight, being parallel with the base line. When, however, a square, or any cubical form, is viewed at the angle, the two sides will not appear to vanish in the point of sight, but run to two points on the horizontal line, called vanishing points; and this mode of treating the subject is called angular perspective. Now these two points are always at an equal distance from each other, which is one-fourth of a circle, therefore if one is determined upon, the other is easily found; for as one departs from the point of sight, the other appears to approach it, as any one may perceive by turning round a sheet of paper, or a book, from a situation where one side is parallel with the base line, until it is viewed upon the angle; the

cause of this perhaps may be more clearly explained by the following figure.

*Fig.* 13.




Suppose the circle to represent the line of the horizon, which is the true representation of it when viewed out at sea, or where no obstruction intercepts it, for then the water coming in contact with the sky, presents a circular horizontal line. If a person, therefore, was placed at D, and looking to the point A, the line C would be parallel with the base, being at right angles with A, and consequently occupying one fourth of a circle; but if he turned in the direction of B, then A and C would become vanishing points, though still at equal distances upon the horizontal line, and would appear thus,

*Fig.* 14.


In a panorama, which is a circular canvass, viewed from the centre, this mode of measuring the various points is found to agree perfectly with the natural representation of objects.

## CIRCLES.

If any one takes a drinking glass or cup in his hand, with the mouth of it towards him, and gradually turn it from him, carefully watching it passing through all the elliptical forms, until the brim becomes a straight line in appearance, he will have a correct idea how it is that columns, or other circular objects, assume an oval shape at the top or bottom, according as they are below or above the eye. Or if he holds the cup with the side downwards, and turns the mouth gradually round towards him, he will perceive the cause why arches, or circular gateways, appear elliptical in a side view. It arises from parts of the circle being more foreshortened than other parts; that is to say, those parts which come more in the line of the visual rays. For example, let a circle be divided into equal parts, and

*Fig.* 15.

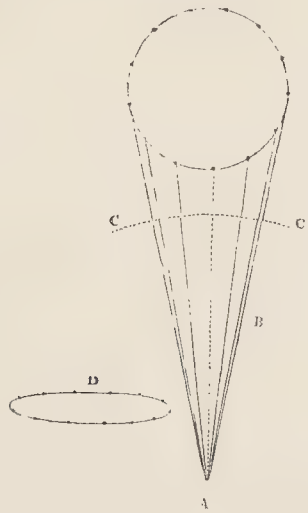



*Fig.* 16.

suppose the eye of the spectator placed at A, those parts which lie in the

direction of the rays of vision, B, occupy less space on the line, C, which cuts through them, and when drawn upon a flat surface would present an appearance like D, *Fig.* 16. Or imagine a line drawn through the centre, parallel with the base line, and which accordingly retains its exact length, those portions of the circular line which lie in the same direction are less diminished; while the other parts, lying in an opposite direction, naturally become subject to the greatest degree of foreshortening, as in *Fig.* 17.

*Fig.* 17.

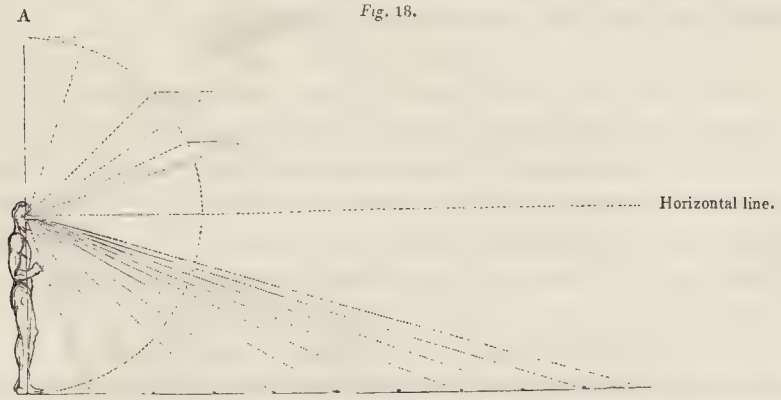
Having now gone through the several forms of a triangle, square, and circle, I shall here recapitulate the influence of Perspective upon their several lines. We have seen that lines are shortened according as they fall in the direction of the visual rays, and retain their original length only when they cut them at right angles; now this takes place wherever the objects are placed, whether near the foreground or in the distance; the eye of the spectator being a point from which imaginary lines radiate in any direction, and which are termed rays of vision, and along which imaginary lines all objects are received upon the retina[6]; and though in painting we are obliged to delineate every thing upon a flat surface, yet properly speaking, the line which cuts through these rays at equal distance from the eye is circular. We have seen also, that all objects diminish in size according to their distance from the spectator: and that this diminution is more or less sudden according to the closeness

[6] *Kepler*, who in 1600 was the discoverer of the seat of vision on the *retina*, says, as to the images of objects being inverted in the eye, it is the business of the mind to trace the progress of them through the pupil, and refer them to those places of the objects themselves from which they seem to have proceeded.

of the spectator to the object; upon this matter the taste and judgement of the artist is shown, because though true according to nature, yet it may be represented with a very bad effect, and one figure of a group, or one column of a row, may be rendered preposterously large, so as to offend the eye, which, though at all times pleased with the truth, yet will be more delighted when that truth is rendered agreeable[7]. When this distortion takes place in reality, we naturally change our position, until the eye is satisfied; but in painting, the whole being a flat surface, we change our position in vain.

We have also seen that all horizontal surfaces of objects diminish in breadth as they approach the horizontal line, and regain their true width when they depart from it, either by being immediately above the eye, or directly under it, as may be perceived by the following diagram.

*Fig.* 18.




[7] Reynolds, in a note upon Fresnoy's Art of Painting, says, " the rules of perspective, as well as all other rules, may be injudiciously applied, and it must be acknowledged that a misapplication of them is but too frequently found even in the works of the most considerable artists. It is not uncommon to see a figure on the foreground represented near twice the size of another which is

Now this rule applies to all flat surfaces, whether approaching the horizontal line, in consequence of their distance from the spectator, or from being placed at different degrees of height; for if they reach the eye in the direction of an angle of forty-five degrees, which is equidistant between a perpendicular and a horizontal line, they will be diminished in apparent width exactly one half; if they are viewed at a greater or smaller angle, they will increase or diminish in the same degree. This is also the cause why surfaces of objects whose lines are at right angles with their base line increase in length as they depart from the point of sight, either to the left hand or to the right, as may be seen by turning the diagram round, and making the line on which the eye of the spectator is placed a horizontal line in place of a perpendicular. This may appear too much a repetition of what has already been said respecting the cause of objects becoming foreshortened; but as it is the base on which all rules for true drawing are founded, it must be viewed in every position, that the student may thoroughly comprehend it.

When the mind of the student is informed of the various causes operating upon lines so as to change their appearance to the eye, let him look abroad upon natural objects, and contemplate the various changes produced in their forms by their situation, so that his eye may become familiar with those alterations in form, and his mind enriched by a variety of examples; thus making nature furnish him with a thousand diagrams,

supposed to be removed but a few feet behind it; this, though true according to rule, will appear monstrous. This error proceeds from placing the point of distance too near the point of sight, by which means the diminution of objects is so sudden as to appear unnatural, unless you stand so near the picture as the point of distance requires, which would be too near for the eye to comprehend the whole picture; whereas if the point of distance is removed so far as the spectator may be supposed to stand in order to see commodiously, and take within his view the whole, the figures behind would then suffer under no such violent diminution."

which he ought to draw and write down his remarks upon; he will by this method not only educate his eye, but improve his mind at the same time: the study of drawing being intimately connected with observation and reflection.

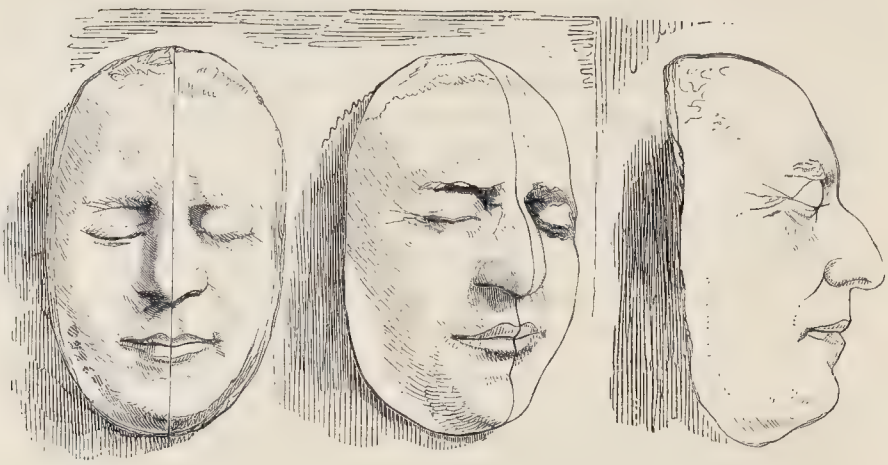
Having now endeavoured to explain the leading principles of perspective, I shall proceed to put them into practical application; but I must premise, that it is an essential requisite before proceeding to delineate any object, that we make ourselves thoroughly acquainted with its general character, otherwise the eye cannot convey to us its image distinctly; neither can the hand render it with energy or precision. Let us take, for example, the human face, the component parts of which every one is acquainted with, yet the niceties of distinction in the several features few eyes can perceive, or render with perfect accuracy. This oftener arises from a want of due examination, so as to be able to guide the eye, than from any deficiency in the eye itself; hence we perceive in the drawings of children and rude nations, a profile with the eye represented as if viewed in front, or a full view of the face with the nose as if seen in profile. To avoid such incongruities, therefore, the eye must be taught to see the changes which take place, and the mind be made acquainted with the causes of such change[8]. In illustration of which, if we take a plaster cast, or mask of the face, such as is represented in *Fig.* 19, and

[8] Mengs, speaking of design, which he defines as comprehending the outline, or the circumference of things, including the proportion of their length, breadth, and form, says, "this part is composed of two principal divisions, the knowledge of the proper form of a thing, and the manner of seeing it; the one depending upon geometry, the other upon optics: the first implies a knowledge of their optical appearance from the view presented to the sight; this pictorial geometry is necessary to enable the student to delineate with correctness and feeling, and which can only be acquired by careful habit of seeing and drawing with attention. This is the fundamental basis of design, without which it will be impossible to render theoretic knowledge available: for, as in painting, we must express the forms which we see in nature as they present themselves to our sight, and as their beauty depends upon that little more or less which decides their character, so a knowledge of that variation enables us to give a true representation."

draw a line down the centre, from the forehead to the chin, we perceive, when viewed directly in front, that it presents a straight perpendicular line, as in No. 1, though actually full of undulations from passing over the

*Fig.* 19.

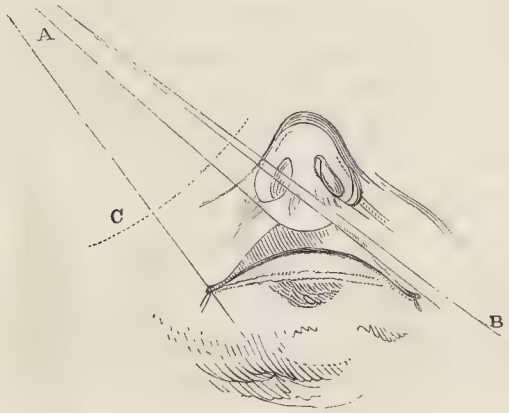
No. 1. No. 2. No. 3.



entire profile, but as these projections and recedings of the line are immediately under each other, they reach the eye in the same manner as if a string was held up before the mask in a perpendicular direction; if, however, the mask is viewed when turned round half way between a profile and front face, as in No. 2, those parts of the line which recede or project will assume exactly one half of their true character and projection; while in the profile, No. 3, the line acquires its exact similitude, from its being undisturbed by those laws which regulate perspective. If we were to proceed and examine every feature in the same manner, we should find that the same laws lead us into a correct view of the alterations which take place upon every alteration in position. To explain this more clearly, if we take the mask and hold it with the chin towards us, so as to observe

the curve on which the mouth is placed, as in *Fig.* 20, we can easily perceive that a person viewing it in the direction of the lines A B, which

*Fig.* 20.




would give him a view of the face between a front and profile (or what is termed by artists a three quarter), would see one side of the lip of its entire length, while the other side, lying in the direction of the visual rays, would be reduced to a very small space, as may be perceived by its breadth on the ideal line, C, which cuts such rays at right angles. Such, also, is the case with the nose, in the same view of the face; one side remains undiminished, while the other side forms a mere outline, being seen entirely under the influence of perspective.

In finishing this part of the Essay, I cannot conclude without reminding the pupil of the extreme importance of the very first preliminaries of the work, teaching the eye the power of measuring the distances between several points, as it is the basis of correct drawing. In drawing a head, if the points where the eyes, nose, and mouth ought to be placed can be correctly put down, one of the greatest difficulties will be conquered, and

the detail of which each feature is composed rendered easy and effective[9], and the same remark applies to the power of combining the several parts of the largest assemblage of objects. The eye marks the distance of one or two leading points, which serve as a station to start from, and by a careful combination of exact dimensions moves over the whole space with a species of ideal trigonometry. Being also educated to observe the variations of the several lines according as they are more or less under the influence of perspective acting upon their form or size, a clear defined outline will be the result; not only unattainable by any other method, but even if attained, unaccompanied by the power of judging of its correctness.

The power of seeing objects correctly is gained by a careful examination of their general appearance, and of the component parts which produce such general appearance; it is necessary, therefore, before proceeding to delineate any object, to observe it attentively in the first instance, to examine it as a whole, so as to be convinced of its great leading features, the various shapes the principal lights take, also the forms of the darks, what occasions them, and why they are darker at one place than at another; the size and shape of the smaller component parts, where they are congregated most, and where the greatest vacuum is situated, where portions are seen entire, and where they are intercepted. Without the eye taking cognizance of all these before proceeding, it will

[9] Reynolds, speaking of Frank Hals, says, "in his works the portrait painter may observe the composition of a face, the features well put together, as the painters express it, from whence that strong marked character of individual nature, which is so remarkable in his portraits, and is not found in an equal degree in any other painter. If he had joined to this most difficult part of the art a patience in finishing what he had so correctly planned, he might justly have claimed the place which Vandyck, all things considered, so justly holds as the first of portrait painters." In another place he says, "the likeness of a portrait consists more in the preserving the general effect of the countenance than in the most minute finishing of the features, or any of the particular parts."—*Sixth and Fourteenth Discourses.*

be impossible to give a just representation, either in the detail or in the general effect[10]; it will, moreover, have a prejudicial influence, in as much

*Fig.* 21.

as it will lead to a style of drawing without feeling, character, or decision. One reason why the drawings of eminent artists are superior to all others is the great intelligence every line indicates, the smallest touch being expressive of the character; another advantage this previous contemplation of the subject has, is the storing of the mind with materials for future occasions, when it is necessary to have recourse to the memory. Knowledge in drawing, as well as in other sciences, is having ready a mass of materials,

[10] To illustrate this, we may have recourse to Titian's bunch of grapes, which we will suppose placed so as to receive a broad light and shadow. Here, though each individual grape on the light side has its light, and shadow, and reflection, yet altogether they make but one broad mass of light: the slightest sketch, therefore, where this breadth is preserved, will have a better effect, will have more the appearance of coming from a master hand, that is, in other words, will have more the characteristic and generale of nature, than the most laborious finishing, where this breadth is lost or neglected.—*Reynolds on Fresnoy*, note 40.

which we can apply to the subject in hand. Drawing much improves us as little as reading much, unless we contemplate and understand as we proceed: those who have acquired a readiness of hand without correctness and study, have but the shadow instead of the substance; and though to the unlearned their works have the appearance of excellence, yet to educated eyes they seem in the light of forgeries, or like the language of him who talks speciously of a subject he does not understand. After the hand has once acquired this delusive dexterity, the student becomes contented, and unable to execute any thing correctly in future. Sir Joshua Reynolds remarks, that "young men have not only this frivolous ambition of being thought masters of execution inciting them on one hand, but also their natural sloth tempting them on the other. They are terrified at the prospect before them of the toil required to attain exactness. The impetuosity of youth is disgusted at the slow approaches of a regular siege, and desires, from mere impatience of labour, to take the citadel by storm. They wish to find some shorter path to excellence, and hope to obtain the reward of eminence by other means than those which the indispensable rules of art have prescribed. They must, therefore, be told again and again, that labour is the only price of solid fame, and that whatever their force of genius may be, there is no easy method of becoming a good painter." In another place he justly observes, that "the first business of the student is to be able to give a true representation of whatever object presents itself, just as it appears to the eye, so as to amount to a deception; and the geometric rules of *perspective* are included in this study. This is the language of the art; which appears the more necessary to be taught early, from the natural repugnance which the mind has to such mechanical labour, after it has acquired a relish for its higher departments." Also in his first Discourse he says, "a lively and what is called a masterly handling of the chalk or pencil, are, it must be confessed, captivating qualities to young minds, and become of course the objects of their ambition. They endeavour to imitate these dazzling excellencies, which they will find no great labour in attaining. After

much time spent in these frivolous pursuits, the difficulty will be to retreat, but it will be then too late; and there is scarce an instance of return to scrupulous labour, after the mind has been debauched and deceived by this fallacious mastery[11]." We find in many of the drawings of Michael Angelo, Raffaelle, and even Rubens, some portions carefully studied and finished with the greatest correctness from the model, some difficult passage which required labour and finish to overcome, or some portion of great beauty, which nothing but fidelity could represent. From the contemplation of the works of the great painters, we perceive a comparative dryness and stiffness in their earlier productions, compared with their later pictures, we therefore are naturally led to conclude that we can accomplish by a shorter method what they have shown us to have been their aim; breadth, grandeur, and freedom of execution: it will be found, however, that though a few strokes by the hand of a master often express in his later works as much as the most careful finishing of his early pictures, yet that arises entirely from his having acquired, by long practice, a mastery over his materials, and, by long contemplation, a

[11] Freedom of execution, or masterly handling, as it is termed, is often taught to pupils that they may appear to be making great strides in the art. The master frequently finds his pupil too dull, or too inattentive, to acquire a correct knowledge of his subject, therefore gives him the power of displaying an appearance of dexterity. To an uneducated eye, a sketch of a tree, for example, may be hit off by the pupil with sufficient resemblance to satisfy all parties; the parents see nothing in the original different from the copy, for that which appears to them but a scribbled appearance, in the original indicates to the eye of an artist foliage, branches, and shadows; thus their education seems finished before it is in reality begun, and they leave school without the power of drawing a line. In after life, when they wish to delineate objects correctly, they find this dexterity rather an incumbrance; the eye, previously debauched, is incapable of receiving a true impression; while the hand, necessarily confined to the several spaces allotted to the different forms, feels cramped and awkward, and obliges them to throw down the pencil in despair. In other branches of science we find this dexterity checked in its infancy. What would be thought of a child who had been taught to run over the keys of a pianoforte without any definite meaning? or of a master who encouraged the scribbling of a boy to imitate a free hand? I remember an artist who always took an opportunity of disconcerting the pretensions of such precocious geniuses in drawing, by laying down a key or a pair of snuffers for them to delineate.

perfect knowledge of what are the leading features and peculiar character of every object.

Notwithstanding the foregoing remarks, careful drawing and minute finishing are to be regulated in a great measure by the nature of the work in hand, otherwise these qualities, excellent in themselves, are liable to be caught at, as an excuse for doing something which requires the least exertion of the mind. Though it is absolutely necessary to be able to draw correctly whatever may be placed before you, yet it does not follow that the same labour is to be carried into the subordinate parts, otherwise a long portion of life might be spent in delineating the intricate ramifications of trees and plants, or in mapping out with painful fidelity the hedges and ditches of a whole county. The correctness of which it is necessary to be possessed is to be employed in rendering with accuracy the vital portions of all works, frequently leaving the minor passages to be filled up from our general knowledge and practice. How vexatious is it to see young men attending Academies and Museums, month after month, drawing from antique statues, in place of bestowing their whole care in giving the outline and form correctly, waste their youth in industrious idleness, in representing the flaws and excoriations of the mutilated marble, or in smoothly stippling in a surrounding mass of background!

## AËRIAL PERSPECTIVE.

Lineal Perspective being that part of drawing which is produced by the means of lines only, Aërial Perspective is made use of to designate those changes which take place in the appearance of objects, either as to their receding or advancing, from the interposition of the atmosphere; therefore to the application of this quality the artist is mainly indebted for the power of giving his work the space and retiring character of nature: but though the eye is at all times pleased and gratified with the power of

viewing distant prospects, yet objects require a certain definition to lead the imagination, without perplexing and troubling the mind. Neither are we pleased by sudden jumps from the foreground to the extreme distance. The eye is more delighted, therefore, in being carried over a gradual diminution of many intervening objects, or in searching for outlets through screens of intervening trees or clumps of buildings; such perforations assisting by their framework the distant tone of colour with which the most remote objects are nevertheless sufficiently embodied out. Now though the interposition of the atmosphere gives us the means of producing the effect of distance in a picture, yet the mind requires a certain variety to hold it in amusement, and a certain appearance of substance to give a reality to the scene; on the other hand, when the atmosphere is deprived of the means of refraction, by reason of its clearness, a false representation is produced, and objects appear nearer than they are in point of truth (as may be perceived in many scenes in Switzerland), and the eye is deprived of the gratification of viewing the outlines of objects through a variety of strengths[12]. When we reflect that the art of painting is an attempt to deceive the eye, in representing upon a perpendicular surface the variety of planes upon which the several objects in nature are placed; when we reflect that the painter is deprived of many collateral means of assisting the deception, it requires his whole knowledge to be employed in working out the result, lines possessing distinctness of form, bulk, and minutiæ, light and dark to give them their full force upon the eye, colours unassociated with atmospheric influence, with the reverses of all these assisting by contrast. We must admit that a knowledge of aërial perspective

[12] De la Hire enumerates five circumstances which assist us in judging of the distance of objects, namely, their apparent magnitude, the strength of the colouring, the direction of the two eyes, the parallax of the objects, and the distinctness of their small parts. Painters, he says, can take advantage only of the two first mentioned circumstances, and therefore pictures can never perfectly deceive the eye; but in the decorations of theatres, they in some measure make use of them all, different planes being made use of, and different degrees of distinctness.—*Accidens de la Vue*, p. 358.

embraces in its effects nearly the whole art of pourtraying the retiring and advancing of objects. In the works of Albert Cuyp and Claude Lorraine we have many examples of this quality in perfection, where the interposition of the air, whether of a yellow or blue colour, imbues every object with its just proportion according to its relative distance from the foreground, and the near objects are strengthened by black or red or other colours less in unison with the general tone of the picture; also in the foreground of many of the works of Cuyp and others, the student may perceive the shadows under the leaves and stones in the foreground broad, black, and of large decided forms. Now, though this is the general characteristic of this department, we see in many works of the best artists objects very much diminished in size according to their true perspective distance, yet possessing a force of colour little removed from the tints of the objects in the foreground, neither does such harshness prevent them keeping their situations; this arises from the very small space they occupy upon the retina, forming so diminished a picture in the eye, even when painted of the size of nature[13]. In historical compositions, the most distant objects form often a portion of the story; they are, therefore, to be pronounced with that strength which will enable them to assist the painter in producing the desired effect on the mind of the spectator, nor does truth appear at all violated, provided they are not

[13] Speaking of the *retina*, Dr. Roget says, " few spectacles are more calculated to raise our admiration than this delicate picture, which nature has with such exquisite art, and with the finest touches of her pencil, spread over the smooth canvass of this subtle nerve; a picture which, though scarcely occupying a space of half an inch in diameter, contains the delineation of a boundless scene of earth and sky, full of all kinds of objects, some at rest and others in motion, yet all accurately represented as to their forms, colours, and positions, and followed in all their changes without the least interference, irregularity, or confusion. Every one of those countless and stupendous orbs of fire, whose light, after traversing immeasurable regions of space, at length reaches our eye, is collected on its narrow curtain into a luminous focus of inconceivable minuteness, and yet this almost infinitismal point shall be sufficient to convey to the mind, through the medium of the optic nerve and brain, a knowledge of the existence and position of the far distant luminary from which that light has emanated.—*Dr. Roget's Bridgewater Treatise.*

made out with too great precision: in history and the higher walks of the art, where the greatest liberties are allowed, it may be less necessary to notice the conduct of the best artists in this particular, but we often find it even in landscapes and common representations of natural effects: how often have we observed wood scenes and others prevented from being heavy by the introduction of a few dark touches, and breadth of colour and space produced by the small dark of a figure. When, however, the effect of hazy sunshine (such as we see in the works of Cuyp) is to be represented, the most distant objects ought to be rendered with the greatest delicacy; for the whole atmosphere being then filled with the refraction of light, the middle ground objects appear to be made out with a uniform tone of half-tint. Aërial perspective, therefore, though understood to be subject to rules, is more completely under the control of the painter than lineal perspective.

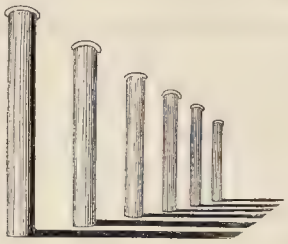
I have noticed elsewhere[14] how much in reality objects in motion attract the eye of the spectator, with what intelligence the peculiar walk of those we know is communicated even at great distances: this is one reason out of many why we are allowed to pronounce parts of a picture with more strength than other parts; as the mind of the spectator must be arrested with the same force it feels itself acted upon under natural effects.

The application of aerial perspective, therefore, enables the artist to keep the several objects in their respective situations, and give a natural reality to the most complicated scene. A row of columns will diminish according as they are drawn true to lineal perspective, but it is to this quality of light and shade that they are indebted for their effect upon the

[14] In Practical Hints upon Light and Shade.

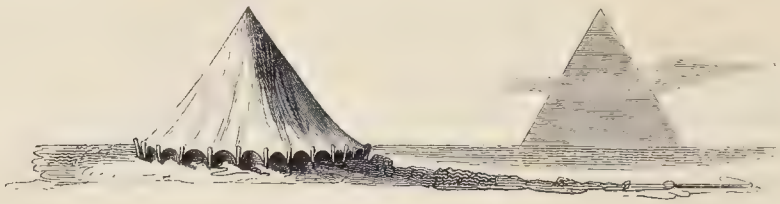
eye. Also two angles may occupy the same space on the retina, but by

*Fig.* 22.



this power one is made to approach and the other to recede, so that one is diminished to the size of a tent, the other increased to a pyramid.

*Fig.* 23.



In Plate I. *Fig.* 1, the Canal of Dort, by Cuyp, in the Bridgewater collection, we not only find an excellent example of aerial perspective, but also of that assemblage of lines produced by the repetition of forms, which assists the receding of objects from their diminution, the doubling of the lines in producing richness of effect, and that harmony which arises from one line counteracting another in its direction, giving thereby a general balance to the whole. The effect of aerial perspective upon the eye being mainly attributable to the application of shadow to the several outlines, thereby giving them their approaching or receding character, such arrangement is to be chosen which will give them this quality, and which

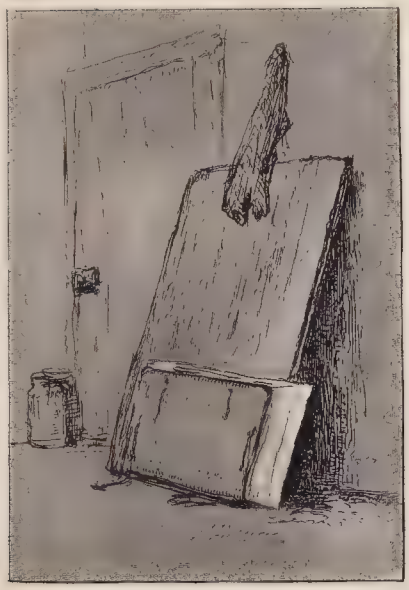


Plate 1. J. Barrat

is to be afterwards repeated in smaller portions through the piece. In accidental combinations in nature, we often perceive this arrangement, (as in *Fig.* 2, Pl. I.) which ought to be sketched and reflected upon as one of the great means we have of enabling us to cope with her under the disadvantage of working upon a flat surface. We also find aerial perspective indebted in its effect to the collection of many parts, whose shadows form a mass of half tint, their distance bringing them in apparent contact, owing to their diminutions; while their softness gives them apparent distance, owing to their want of minute parts, as in *Fig.* 3, Pl. I.

To go through on every occasion with a variety of examples, would, I feel persuaded, only perplex the student; if he comprehends any rule, it is easy to extend it; to those who understand slowly, reflection on one or two diagrams will be of more service than educating the eye without impressing the mind. The real trouble in life, in all professions, is the trouble of thinking; to escape which, the most laborious trifling is caught at, but if fairly grappled with in the outset, every thing becomes clear, and, in after life, that which is a continual annoyance to many becomes one of the greatest gratifications. Why is it, that to the eye of an artist the drawing of a complicated plan is rendered clear at a glance, while to others it requires a multitude of figures of reference and a long explanation? It is, that his mind has been educated in continual intercourse with the eye, and the constant habit of reflecting on cause and effect has rendered a numerous assemblage of lines intelligible to him, which to others uneducated appear like a species of hieroglyphic.

## CHIARO OSCURO.

Chiaro oscuro, or light and shade, when applied to the management of a picture, takes a range too wide to be explained without the assistance of a multitude of examples. and even then it would be very imperfect; so endless and multifarious are the changes it assumes, being entirely at the caprice of the painter. Paul Veronese, when questioned about the propriety of accounting for a shadow, answered, " a cloud is passing;" and Reynolds says, " the proprieties of a painter are superior to all other considerations," and " he whose aim is to touch the passions must not be too fastidious in pandering to an uneducated eye. The effect is to be produced at any sacrifice; but the painter who accomplishes his purpose with the least violation of truth shows the greatest command of his materials." This it is which places the works of the great painters beyond the comprehension of the ignorant; they only can judge of external matters, and are pleased when the eye alone is gratified; whereas the aim is the homage of the educated mind. " Leonardo da Vinci," Reynolds remarks, " recommends the light side of a group to be brought off a dark ground, and the dark side opposed to a light ground; this, no doubt, was the practice when the arts were in their infancy, but had he lived to see what has been produced by the contrary method, he would have altered his opinion." If relief or distinctness is the aim of the artist, it is certainly the best; but if breadth of effect, he will best accomplish it by combining light with light, and losing the darks of the group in a still darker background.

Light and shade, therefore, independent of its effects in rendering objects more distinct and intelligible, has other properties, and those of a higher quality, when painting has to take a station in the ranks along with music and poetry, these properties are the means of giving breadth and grandeur of form, the effects of bustle or repose, and that peculiar

emphasis which particular portions of a composition require. Now in many situations, where such qualities are requisite, nature offers often little more than a suggestion, and upon such hint the artist is obliged to lay the foundation of his whole scheme, and work it out according to the command he has of his materials, or the quantity he is in possession of. Some compositions being entirely addressed to the mind, while others are confined to a mere gratification of the eye, a greater or less liberty is allowed to be taken with the arrangement of the light and shade, according to the nature of the work in hand. Light and shade, or the conduct of the chiaro oscuro of any work, is therefore entirely given up to the control of the artist, to be used for the express purpose of rendering his design complete; where he departs too much from the arrangements observable in nature, it becomes capricious, and loses its effect upon the eye of the spectator; when, on the other hand, the every day occurrences are adopted, his work becomes common and feeble. Reynolds says justly, " when we are required to paint broad, it is not understood that we should paint broader than nature; but objects are to be so placed, that there is scarcely any limit to their breadth of light and shade. In the earlier stages of painting, relief and distinctness were the only requisites sought after[15]. If a round object could be represented upon a flat surface,

[15] In the early stages of the art, we find the outlines of the Egyptian and Grecian figures and ornaments upon the walls marked with a broad, deep, sharp cut indentation, which, receiving a strong shadow, gave great distinctness. In the next stage, we find that the figures were a little raised, so as to form what is termed *basso relievo;* and that they were not rounded gradually from the ground, but cut perpendicularly to the surface. In the more advanced state of the art, when the figures assumed a greater projection, and became what is termed *alto relievo*, where some portions are entirely cut through from the surface, as may be seen in the Elgin marbles, the outlines of those figures less advanced were rounded off, so as to receive less shadow, and thereby give greater value to those in high relief: we also find an attention to the effects of light and shade influence their management of single statues, in the construction of their buildings, and even in the forms of the most trifling utensils. We thus see that the gratification of the eye is one of the chief sources from which the taste of a country emanates, and its perpetuity is in proportion as it is founded upon the great truths observed in the general character of nature, and its influence on

or any substance so expressed as to induce the spectator to put forth his hand to touch it, as a test of the deception, the height of the artist's ambition was attained; but as the art advanced, it was found that painting could achieve more honourable results, the mind was to be acted upon, without stopping to gratify the eye at the threshold of entrance. Coreggio seems to have been one of the first who employed chiaro oscuro in its greatest extent, to give to his compositions that dreamy character which removes them from the "ignorant present," and which is the result of breadth, and melting of the outline in the tint which surrounds it. If we examine, for example, a room filled with several objects, in open day, the distinctness with which they all present themselves to the eye not only perplexes it in finding a resting place, from each claiming attention, but the quickness with which we are carried from one object to another (from a single glance being sufficient to satisfy our curiosity) destroys that pleasure the mind receives from contemplation; whereas the same scene viewed in the evening, by the light of a fire or candle, exhibits effects more pleasing to the eye and gratifying to the mind, which are entirely owing to the breadth of light and shade; fewer objects present themselves to the eye, and these few acquiring novelty in their forms, from the shadows floating about; others entirely buried in obscurity, amuse the imagination in tracing them into form; while the large blank spaces present vacuums for the eye to rest and repose upon. Independent of these results, we also know that objects acquire grandeur from their

succeeding ages, by its adoption by men of science capable of appreciating its value. Even in the dark ages, when truth and simplicity were overlaid and hid by a mass of ornament and an assemblage of minute parts, a combination of beautiful arrangement has arisen out of such Gothic absurdities, which has given to painting, sculpture, and architecture a fulness of effect unattainable by any other method. The endless and fatiguing portions of minutiæ, which lay scattered over the surface, have been collected, and arranged in masses of richness and repose; the spottiness of strong, harsh colours have been softened and subdued by harmony and opposition; while the dry and cold outline of individual form has been adapted to the gratification of the educated eye, founded upon the great principles of truth and simplicity.

breadth and simplicity of parts, the shadows being more of one strength, and the lights more of one colour; two concomitants of greatness.

In entering upon this branch of the art, it will, however, be necessary to confine our remarks, in the first instance, to the effects of light and shade upon the forms of objects, in altering their appearance to the eye of the spectator, without reference to their acting upon the imagination.

All outlines, without the application of this quality, are deficient in giving a true representation to the eye; for example, two circular outlines without shadow have no distinct meaning, but by the application of this property they either become convex or concave bodies[16].

*Fig. 24.*

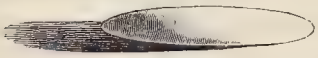


*Fig. 25.*

We also find that objects either project or recede according to the strength of their shadows, and become either solids or vacuums from their shadows falling within or without the spaces marked by their outlines.

*Fig. 26.*

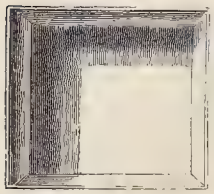
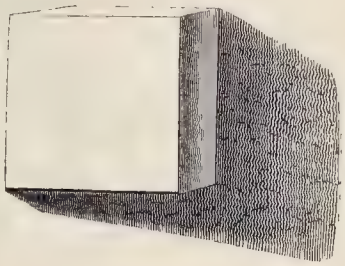


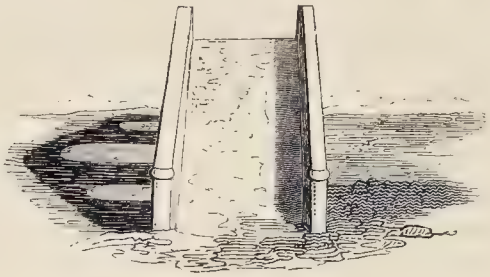
*Fig. 27.*



[16] "We judge of the figure and shape of bodies chiefly by the variations of light and shade, and our associations taken thence are so strong, as we are easily imposed upon by a just imitation of the light and shade belonging to each shape and figure in their several situations with respect to the quarter from which the illumination proceeds. It is from the associations considered under

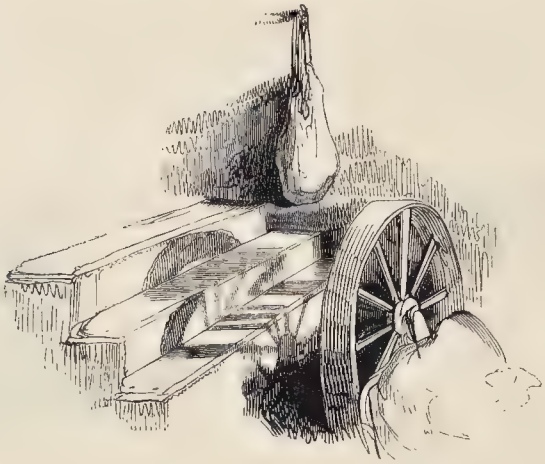
We also find that it often indicates the peculiar character of objects, when the outline is hid in consequence of the situation of the spectator, as in *Fig.* 28.

*Fig.* 28.



In drawings of machinery this is often of the utmost importance, as information is the only point aimed at. We likewise often find shadow

*Fig.* 29.



this proposition, and particularly in the last paragraph, that painting conveys such exact ideas of shapes, figures, magnitudes, and distances, and the camera obscura of motion also, by means of impressions that proceed from a plane surface."—*Hartley on Man, on the Sense of Sight.*

made use of for the enriching of the subject, by making the shadows of complicated objects fall upon a background of an uneven surface, as in *Fig.* 29.

Any work treating of the Education of the Eye, however short, must necessarily touch upon points spreading over a large range of study, and of course occupying a long space of time to become master of. It will, therefore, be difficult to separate those parts which require a power in the mind, from that portion which depends more upon the cultivation of the eye, accompanied with very little effort of thinking. Nothing but early practice can enable the eye to see, and the hand to put on paper, the various objects necessary to painting with readiness and fidelity; as has been remarked by Reynolds, who says, " a degree of mechanical practice must precede theory; the reason is, that if we wait till we are able to comprehend the theory of the art, too much of life will be passed to permit us to acquire facility and power; something, therefore, must be done on trust, by mere imitation of given patterns, before the theory of the art can be felt;" yet, nevertheless, the attention should be gradually awakened to observation, otherwise the power of the mind will lie too long dormant to be easily called into action when judgement is acquired, for, as he further observes, " an artist ought to see clearly enough to enable him to point out to others the principle upon which he works, otherwise he will be confined, and, what is worse, he will be uncertain." In the portion of this Essay, therefore, which is passed over, I have endeavoured to confine myself merely to that extent of knowledge which every one ought to possess to enable him in after life to enjoy the beauties of nature and art, and give him the power of communicating his ideas usefully to others. I shall now endeavour to trace through the higher departments of art those principles of design upon which painting depends for its operation on the mind, and which places it in the same rank with poetry and music.

## INVENTION.

Invention is the great soul of painting, without which the being in possession of an accumulation of studies is of little avail; we may collect the materials, but we cannot build without a plan, nor can we construct that plan without a perfect knowledge on what to raise the superstructure. When Raffaelle was commissioned to paint the apartments of the Vatican with representations of Theology, Philosophy, Poetry, &c. it was necessary, in the first place, that he should know not only the origin and foundation of each of them, but also the character and history of those personages who ranked preeminent in the several departments of science, that by the combination of such figures he might be enabled to illustrate the subjects in hand; for it is by this method that the artist shows his imaginative powers; for though this part of the work may belong to the poet and historian in an equal degree, yet the mind of an artist, from his habits of thinking and from a knowledge of what is within the power of his art, gives the illustration of the subject a more graphic turn than either[17];

[17] It is the descriptions of poets and historians possessing this character which renders them more striking to the imagination; such as the description of the Last Judgement by Peter Aretin, which made Michael Angelo regret that he had composed the subject previous to receiving his letter: "Who would not tremble," he writes, "at taking up his pencil to trace so tremendous a subject? I see, in the midst of innumerable beings, Antichrist, with features which you alone could imagine; I see terror imprinted upon the face of the living; I see the faint traces of the sun, the moon, and the stars, whose fires are perceptibly diminishing. The elements appear dissolving. I see all Nature horror-struck, barren, and gathered up in its decrepitude; I see Time emaciated and trembling, who, arrived at his last stage, is reposing on the dried-up trunk of a tree; and while the trumpets of the angels resound through all hearts, I see *Life* and *Death* overwhelmed with extraordinary confusion, the one is wearied with lifting up the dead, while the other strikes down the living; behind, I see Hope and Despair conducting troops of the good and the bad. The sky is suffused with the brightest rays. Christ, seated on clouds, is environed with splendour, and with the terrors inspired by the heavenly hosts, his face is resplendent with light, and his eyes, shining with a soft yet terrible fire, fill the virtuous with lively joy, and the wicked

therefore, though the education of an artist's mind is in many things similar to the education of that of others, yet, in addition, he requires a knowledge of the various methods the great painters have employed to explain and exemplify their ideas; "for it is only by knowing the inventions of others, we learn to invent, as it is by knowing the thoughts of others we learn to think." Mengs observes, that it is invention which makes noble the art of painting, and discovers the force of the artist's understanding, and that Raffaelle obtained a rank with great poets and orators from this source. Invention being the work of the mind addressed to the mind, composition that of the eye addressed to the sight; yet though in many things the mind of the poet or historian is similar to the painter's, the power of the latter is much more limited; the historian may have a hundred pages to convey his story, the painter has but one; this circumstance has led mankind in all ages to allow him a greater latitude and license in embodying any representation; his invention, therefore, takes a wide range through the whole features of the event, whatever it may be, and enables him to combine in one focus every means of rendering the story attractive, clear, and effective; he invents, therefore, those arrangements which awaken the mind, from their giving rise to an association of ideas; he selects also those points which bear the strongest upon the character of the subject to be represented, and which from their nature are most palpable to the eye, to heighten their effect by the judicious introduction of images operating by means of contrast, and endeavours to combine the whole by the most natural and unaffected method. The power of invention, therefore, in a painter, must depend

with mortal fear. I see the ministers of hell, with horrible countenances, who, surrounded by the glory of saints and martyrs, mock the Cæsars and Alexanders of the world, and yet not knowing how to get the better of themselves. I see Renown, with her crowns and palms trodden under foot, thrown down under the wheels of her own triumphal chariots. I hear the Son of God pronouncing the *last judgement;* at his voice the good and the bad are separated; the world crumbles to pieces at the peals of thunder. Darkness divides Paradise from the furnaces of hell. In retracing these terrible images, I said to myself, one would tremble as much at seeing the work of Buonarotti as at the day of judgement itself."—*Peter Aretin's Letters from Venice.*

upon his extent of information, his command of the materials applicable to his art, and a felicitous choice of the particular incidents most striking to the eye. If he invents from history, it will be necessary to take the most current version of the story for his guide, and engraft upon it those embellishments derived from costume, manners of the people, and local scenery; painting every thing from nature, which gives a wonderful appearance of truth and force to the representation. From poetry or allegory a greater liberty of enriching the design will be allowed, as the whole range of ancient and modern fable lies open for his purpose of illustration. At the head of this department of the art, by universal consent, and especially by those who have most carefully examined his works, stands Raffaelle; not only do his inventions embrace the most leading and most striking parts of the story, but he carries the spectator back to its commencement by a chain of the most natural circumstances, and shows also by the same felicitous extension of his design, those results which followed its taking place; thus exhibiting in one page the contents of a volume, such as we see in his Death of Ananias, his Transfiguration, the School of Athens, the Sacrifice at Lystra, and many others. Lanzi, speaking of this quality of Raffaelle, says, " Various writers have mentioned the St. Paul at Lystra, one of the Cartoons, as an example, (Plate ii.) The artist has there represented the sacrifice prepared for him and St. Barnabas as to two gods, for having restored a lame man to the use of his limbs. The altar, the attendants, the victims, the musicians, and the axe, sufficiently indicate the intentions of the Lystrians; St. Paul, who is in the act of tearing his robe, shows that he rejects and abhors the sacrilegious honours, and is endeavouring to dissuade the populace from persisting in them; but all this were vain, if it had not indicated the miracle which had just happened, and which had given rise to the event. Raffaelle therefore added to the group the lame man restored to the use of his limbs, now easily recognised by the spectators: he stands before the apostles rejoicing in his restoration, and raises his hands in transport towards his benefactors, while at his feet lie

Raphaelle Urbi

[illegible]

[illegible]

[illegible]

the crutches, now cast away as useless; this had been sufficient for any other artist, but Raffaelle, who wished to give a greater appearance of reality, has added several people, who, in their eager curiosity, remove the garment of the man to behold his limbs restored to their natural state." As the people called St. Paul, Mercury, from his being chief speaker, Raffaelle has alluded to this by a statue of Mercury in the distance, and a figure in the foreground with a chaplet of ivy, bringing in a ram, both indicative of the sacrifices to that god. By the uplifted hands of the restored cripple, and the youth who stretches out his hand to arrest the arm of the sacrificers, we perceive the effect of St. Paul's persuasions, in the same way as he indicates the conversion to Christianity of the woman of Damaris and Dionysius in the Cartoon of Paul preaching at Athens. In the inventions of Raffaelle we find the representation of any event extending its effects on the several spectators in a variety of ways, producing the most natural action and expression, and all conducive to the illustration of the subject: his rich store of materials from the Greek and Roman antique, with the inventions of those artists who preceded him in the restoration of painting in Italy, enabled him to embellish his design with an endless accumulation of incident, giving chasteness, simplicity, and the power of carrying the mind back to times long gone by; no one has possessed so great a command over his materials, or greater address in adapting them to his own purpose; the Greek gems and statues, the Roman basso relievos, the primitive character of the works of Giotto and Masaccio, the grand outline and foreshortening of the figures of Michael Angelo and Leonardo da Vinci, may be all traced through his works, but the inventive genius which has called them into new existence with a more natural and a more powerful effect on the spectator, is peculiarly his own.

Invention being more properly a combination of those qualities which affect the mind and awaken sensations in the imagination of the spectator, the inventions of Raffaelle affect different spectators according to their

different degrees of taste or cultivation; whereas the inventions of Paul Veronese, Tintoret, and others of the Venetian school, being more addressed to the eye, please and captivate all beholders, from their harmony of light and shade, and their beautiful and gorgeous arrangement of splendid colour. With Raffaelle, the leading point of the story is boldly and nobly expressed, while its effects are diffused and spread over the countenances and actions of the adjoining figures, and revived and embellished by episodes and representations of the preceding and following events, acting upon the more subordinate or more extended portions of the composition, such as we see in the Ananias, the Heliodorus, the Sacrifice at Lystra, the Attila, and the Transfiguration. Thus what is effected in the one case by the diffusion of light and colour, is produced by Raffaelle through the medium of the expression and action of his figures; this it is that has gained for him the appellation of the painter of mind; and his making use of those materials from which the taste and cultivation of the mind is derived, gives to his works that charm which increases by contemplation, since they revive within us ideas of all the great and beautiful works we have ever beheld.

Invention being more properly the province of the mind than the eye, perhaps it is unnecessary to dwell longer upon it in this place; but we must always bear in recollection that the mind of an artist is formed from a contemplation of those circumstances which it will be in his power to make use of, and that is one reason, amongst others, why I dwell more particularly upon the inventions of Raffaelle than upon those of Michael Angelo[18]; they are more practical, and can be adopted by those whose

[18] Reynolds, drawing a comparison between Michael Angelo and Raffaelle, says, "Raffaelle had more taste and fancy, Michael Angelo more genius and imagination. The one excelled in beauty, the other in energy. Michael Angelo has more of the poetical inspiration; his ideas are vast and sublime; his people are a superior order of beings, there is nothing about them, nothing in the air of their actions or their attitudes, or the style and cast of their limbs or features, that reminds us of their belonging to our own species. Raffaelle's imagination is not so elevated; his figures

works are addressed to the feelings of all classes, or, as Lord Bacon says, "come home to the business and bosoms of most men." The inventions of Michael Angelo, on the other hand, elevate the feelings only of the learned, while they appear extravagant and overcharged to the generality of mankind; notwithstanding which, this is the spirit which ought to influence the taste and genius of other artists, and which made Raffaelle exclaim, that "he thanked God that he was born in the same age with that great man[19]!" We need not go further than refer to his great work

are not so much disjoined from our own diminutive race of beings, though his ideas are chaste, noble, and of great conformity to their subjects. Michael Angelo's works have a strong, peculiar, and marked character; they seem to proceed from his own mind entirely, and that mind so rich and abundant, that he never needed, or seemed to disdain to look about for foreign help. Raffaelle's materials are generally borrowed, though the noble structure is his own. The excellency of this extraordinary man lay in the propriety, beauty, and majesty of his characters, the judicious contrivance of his *composition*, his correctness of *drawing*, purity of taste, and skilful accommodation of other men's conceptions to his own purpose. Nobody excelled him in that judgement with which he united to his own observations on nature the energy of Michael Angelo, and the beauty and simplicity of the antique. To the question, therefore, 'Which ought to hold the first rank, Raffaelle or Michael Angelo?' it must be answered, that if it is to be given to him who possessed a greater combination of the higher qualities of the art than any other man, there is no doubt but Raffaelle is the first. But if, as Longinus thinks, the sublime, being the highest excellence that human composition can attain to, abundantly compensates the absence of every other beauty, and atones for all other deficiencies, then Michael Angelo demands the preference." —*Fifth Discourse.*

[19] "From time to time there arise upon the earth men who seem formed to become the centre of an intellectual system of their own; they are invested, like the prophet of old, with a heavenly mantle, and speak with the voice of inspiration. Those that appear after them are but attendants in their train, seem born only to revolve about them, warmed by their heat and shining by their reflected glory. Their works derive not their strength from momentary passions or local associations, but speak to feelings common to mankind, and reach the innermost movements of the soul, and hence it is that they have an immortal spirit, which carries them safe through the wreck of empires and the changes of opinion. Works like these are formed by no rule, but become a model and rule to other men. Few, however, among us are permitted to show this high excellence. Ordinary minds must be content to learn by rule, and every good system must have reference to the many and not to the few."—*Professor Sedgwick's Discourse on the Studies of the University.*

of the Last Judgement, where he introduces Charon ferrying over the souls of the damned, and other allusions to the heathen mythology, which give to the Christian creed the adventitious character of learned fable. On the other hand, Raffaelle grasps his subject with the power of one who relies upon truth and nature for the effect; and, leaving the regions of poetry and fiction, gives an identity to the scene, founded upon the principle of simple facts being ennobled by the great powers of elevated art. Besides, we must never forget that the public taste is already formed from a contemplation of the many great works now in existence, and which have stood the test of ages, and that it is only by being in some manner conformable to these we can ever hope for a favourable reception.

## COMPOSITION.

By Composition is generally meant the form and arrangement of the several parts considered as a whole; consequently, the form or plan of any composition is the first process the painter practically commences with. The nature of the subject having been settled, he weighs in his mind the effect to be produced upon the spectator; he therefore arranges his figures and objects accordingly, and endeavours to distribute his materials in that form which will best accord with his intention. The illustration of his story, the distribution of his light and shade and colour, the localities of the scene, all present their individual interests to his notice; while his imagination embodies them into that congregated form which seems best calculated for his purpose. Here it is, that the memory is called into action; without precedents he cannot judge, without materials he cannot compose. Having now laid down his plan of operations, he applies to nature to furnish him with the means of giving variety and originality to his work; but to bind her to his purpose, he must have a settled knowledge of what he is seeking, he must have a quickness

of eye, to take advantage of accidental arrangements, and a plan of methodizing his ideas, so as to be able to secure what he acquires, without which it will be impossible to produce a composition upon which he can calculate with any degree of certainty as to its effects or its stability, and what he paints one day he may obliterate the next. Composition not being an inherent quality of the mind, but the result of long acquaintance with the nature and arrangement of the compositions of others, it generally follows, that all wayward and capricious compositions, established neither upon natural grounds, nor upon the scientific arrangements of those who have preceded us, seldom outlive their inventors, for pleasing only by reason of their novelty, they gradually lose their interest as that novelty vanishes; or, as Dr. Johnson expresses it, "the irregular combination of fanciful invention may delight awhile by that novelty, of which the common satiety of life sends us all in quest; the pleasures of sudden wonder are soon exhausted, and the mind can only repose upon the stability of truth."

Geometric forms in composition are found to give order and regularity to an assemblage of figures, for, in fact, we can have no idea of form without a portion of distinct shape, which being arranged so as to make one part of the composition dependent on another for its completion or extension, produces an harmonious assemblage of lines, independent of the aid of light and shade or colour. Groups of figures without some appearance of geometrical form apparent to the eye, would produce a confused effect upon the spectator, in whose mind their appearance would indicate one subject as strongly as another, and look picturesque, when such character might be destructive of the impression intended to be produced. We have an excellent example of the influence of lines, or arrangement of parts, in the composition of Attila, by Raffaelle; we see on one side the rude irregular descent into the Campania of Rome of the congregated tribe of the Goths and Vandals, leaving fire and desolation in their rear, and hurrying forward with savage wildness; opposed to

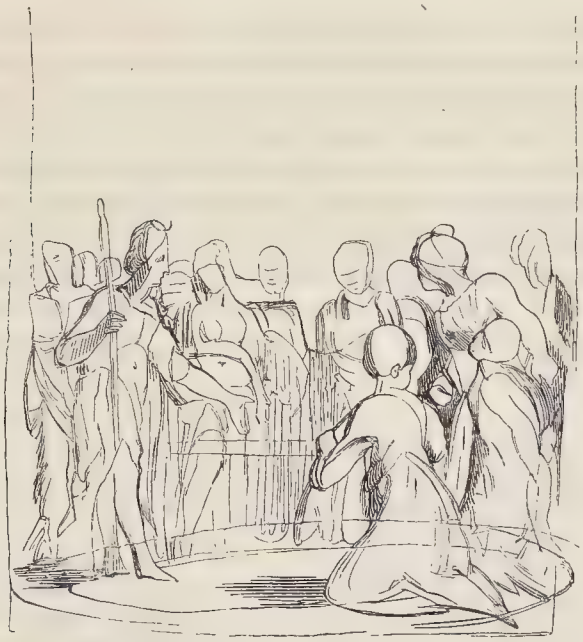
which, enters the head of the Christian church, with the ministers of the cross, calm, meek, dignified, and upright, secure in the protection of Heaven, whose messengers are seen descending; those noble warriors, St. Peter and St. Paul, spreading by their appearance terror and dismay into the hearts of Attila and his followers: and thus it is that the painter is enabled, by the assemblage of lines and forms, to produce upon the mind those sensations which the poet effects by a combination of words, or the composer of music by an arrangement of expressive sounds.

To simplicity and regularity of form we are indebted for the foundation of what is great and sublime, for, as Johnson expresses it, "sublimity is produced by aggregation, and littleness by dispersion." In architecture we find this a main cause of grandeur: Burke says, "vastness in any object, infinity, succession, and uniformity of parts in building, or any object in nature, are all sources of the sublime, succession of uniform parts creating a kind of artificial infinite, and this may be the cause why a rotund has such a noble effect in building[20]." Having observed before that the architecture introduced into the works of Raffaelle is of a simple and uniform character, it often seems to have been his design to carry out and extend the perspective and general form of his plan by the arrangement and position of his figures, such as we see in his School of Athens; and De Piles says, "he found in some of his sketches, plans and scales of proportion." One or two memorandums

[20] Addison, noticing how much simplicity of parts and greatness of manner in architecture affect the mind, quotes a passage of M. Feart's Parallel of the Ancient and Modern Architecture. "I am observing," says he, "a thing which in my opinion is very curious whence it proceeds, that in the same quantity of superficies the one manner seems great and magnificent, and the other poor and trifling; the reason is fine and uncommon. I say, then, that to introduce into architecture this grandeur of manner, we ought so to proceed, that the division of the principal members of the order may consist but of few parts, that they be all great, and of a bold and ample relievo and swelling; and that the eye beholding nothing little and mean, the imagination may be more vigorously touched and affected with the work that stands before it."

which I found amongst the collections of drawings left to Christ Church, Oxford, by General Guise, seem to confirm this observation. The memorandums are written upon the side of sketches illustrative of the remarks, one of which I have given in PLATE III. containing the ground plan, also the figures seen under the influence of perspective; the other, showing a circular arrangement of figures, such as we see in the lower part of the Transfiguration, and in the Death of Ananias; viz.

*Fig.* 1.



To Dr. Barnes, of Christ Church, I am indebted for the very great interest he took in enabling me to procure copies of any of the drawings. For the translation of the memorandums, and remarks upon the designs, I

am indebted to the kindness of C. L. Eastlake, Esq. R. A., whose intimate knowledge of the compositions of Raffaelle must give his observations additional weight[21].

Independent of forms in composition most suitable to the subject, and arranged in the most natural manner, it is of the first consequence that the

[21] Translation of the memorandum on the side of the sketch representing circular composition :—

" It is to be observed, that the first thing to be considered in an historical composition is where the point *(id est,* the spectator or spectator's eye) is to be placed, whether in the middle of the work or on one side, and so to determine its situation that the important figures be distinctly visible, and not concealed by others, and then begin the design. It is my opinion, confirmed by the practice of the most skilful men, that the mode explained by a drawing in the margin (is generally fittest), viz. by contriving that those figures which are nearest to the point should present their backs, those further removed their sides, and so on in perspective, as if a circle were drawn and figures ranged round it, so should an historical composition be designed."

In illustration of the above, supposing an action to be represented in a circle, which would be quite natural if the object of attention were in the centre, the spectator might either view it so as to be himself without the circle, or be supposed within it. In the latter case, the nearest figures would have their sides towards him, in the former their backs. Thus, when the spectator sees a semicircle, he completes the circle by his forming a part. This arrangement was adopted by the early Italian painters in their sacred subjects, and from its fitness was never abandoned by Raffaelle. The Madonna di Foligno and the Dresden Madonna are remarkable examples, as in these pictures the St. Francis in the first, and the Pope Sixtus in the other, turn to the spectator who contemplates the work, and intercedes for them. The object, in short, by this semicircular arrangement was to mix up the spectator with the divine or sainted personages represented, and to make him feel in their presence.

But in more dramatic representations, in which the spectator might be interested but not a *party concerned,* Raffaelle adopted the more picturesque arrangement, and after him this was unfortunately applied to *devotional* subjects. The drawing by Raffaelle and the note recommend the picturesque arrangement, but as the whole works of the master are the best commentaries on his note, it may safely be affirmed, that he could not have intended this principle to apply to votive pictures ; at present, indeed, in this country, when altar pieces, and especially mere assemblages of sacred personages, are rarely painted, the directions contained in Raffaelle's note may be considered of universal application ; it is only in the critical history of the art that they might lead to false conclusions.—C. L. E.

spectator ought to have such a view of the representation as will be most effective and uninterrupted: this obliges the artist to design those figures in the near part of the composition either in kneeling or stooping positions, that they may not intercept the figures behind, or to elevate those background figures by a higher plane, such as we see in the School of Athens, the Ananias, the Incendio del Borgo, Elymas the Sorcerer, and others: or he may compose his piece upon the principle of the Heliodorus, which, leaving the space vacant in the middle, allows the eye of the spectator to range from the foreground to the distance without interruption: but in whatever form his composition developes itself, it is not more necessary to preserve such form in the strongest character than it is to give the spectator the most pictorial and comprehensive view of the subject; to enable him to judge of this quality, it will be necessary not only to lay down a ground plan, but to model the groups and individual figures, as we know to have been the practice of the best artists, from Michael Angelo and Raffaelle down to the present, which will also, even though roughly executed, suggest the most natural effects of the light and shade[22].

[22] Translation of the memorandum at the side of the drawing given in PLATE III. *Fig.* 1:—

"This is the mode the painter should observe in composing his histories, so that the disposition of the masses should be unconstrained, as if the composition followed the advancing sight in order that the history or picture may be satisfactory to the spectator, and particularly to the experienced spectator. For if arranged without this rule, the said history will be put together defectively, this (*viz.* the mode alluded to) being the true practice adopted by the most skilled and intelligent in the art. This will appear by consulting the works of those painters who are most famous; it is from their adherence to this rule that their works have been so much praised, and with the best reason, for this is the true principle."

The rule here alluded to, and which is sufficiently explained by the drawing which accompanies it, relates to *depth* of composition, as opposed to *superficial* or basso relievo composition; the mere surface is capable in variety, in height, and in width; but these varieties may exist while there is no variety whatever in the *plan;* the figures should therefore occupy the extent of the ground plan as completely as when brought to the surface they appear to occupy the height and

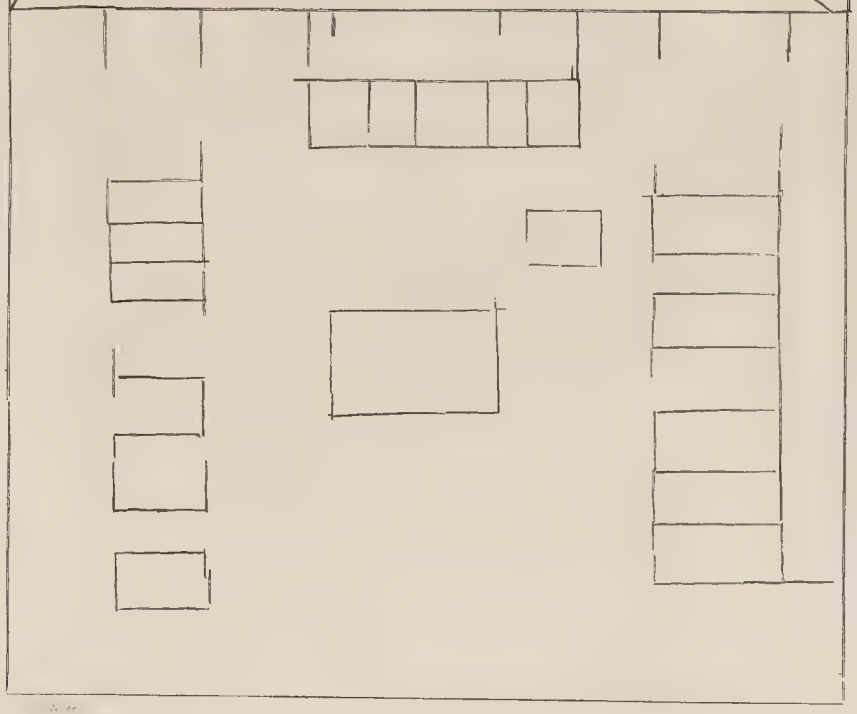
Having decided upon his general form of composition, the several portions of the design next claim his attention; those portions of most consequence to the illustration of the story are to be brought into notice, while other parts are made subservient, by being thrown into shade or more intercepted by their situations; action and repose, masses convex and concave, lines regular or picturesque, spaces diminishing or increasing, are all to be combined in producing an harmonious result upon the eye and mind of the spectator.

We have noticed the peculiar properties of objects under the influence of perspective; viz. circular forms becoming elliptical, spaces diminishing as they recede, objects intercepting those behind, while those on the foreground possess more detail and minutiæ; these qualities are therefore to be engrafted upon the several portions of the composition, that it may have the appearance of truth, and enable the artist to give his work the firmness of nature. In selecting examples illustrative of these remarks, it will be sufficient to give one or two of the most palpable, that the student may be made aware of their character; after which, the whole range of composition, from the revival of painting down to our own time, will be rendered subservient to his investigation. As it is the character of spaces

breadth of the surface or face of the picture. Thus the three possible dimensions are occupied, the art being generally concealed by avoiding too regular a variety, and by doubling the masses somewhere. It only remains to be observed, that of the three applications of varied arrangement, that of the *depth* is the most strictly picturesque, because it most effectually gets rid of the flat surface, and suggests foreshortened limbs and figures, which are most to be met with in the latest works of Titian, Raffaelle, and Michael Angelo; but Corregio, who was from the beginning devoted to *gradation* in forms (perspective) as well as chiaroscuro, was also an early lover of depth in composition, and often of foreshortening.—C. L. E.

*Fig.* 2 is part of a Roman basso relievo, from which Raffaelle took the ceremony of the Sacrifice at Lystra.

*Fig.* 3 shows his adaptation of the ideas of others to his own purpose, being a figure of Masaccio's, which is converted into his St. Paul preaching. Vide Reynolds's Twelfth Discourse.



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to diminish as they recede from the eye, we often find in the works of Raffaelle and others this feature engrafted upon portions of their groups, as in *Fig.* 2, part of the Cartoon of Ananias.

*Fig.* 2.

As it is the character of objects to intercept others more or less, as they recede from the foreground, and as it is their character also to diminish and possess less of detail by their receding, we perceive this principle carried into the works of the great founders of the art in a variety of ways; we can trace it in the Greek and Roman basso relievos, in the figures and heads of Michael Angelo and Raffaelle, and in the works of those who have collected from the great stores of nature and art. The example, *Fig.* 3, is from Titian, part of a subject formerly in the church of St. Nicola de Fiari at Venice, now in Rome.

This regularity of diminution imparts to a work a character of sim-

plicity, and at the same time assists the artist in giving depth to his composition, one figure acting as a background to the other.

*Fig. 3.*

This regularity of diminution not only assists in giving regularity and simplicity to a work, but enables the artist to carry the eye of the spectator into the depths of his composition. We also find it often employed in giving solidity and firmness to those heads or objects nearest the eye; one portion acting as a background to the other, giving to the whole that advantage which arises from the size, detail, and firmness of

foreground objects in nature. *Fig.* 4 is a further illustration of the same principle, being part of a design of Rubens, the picture of the Woman taken in Adultery, in the collection of Mr. Miles.

*Fig.* 4.

In following up the examination of Composition into its component parts, we find it necessary that they should all combine to produce one result upon the spectator. Raffaelle, in extending his composition into the surrounding parts, employs his whole power in illustrating his story, either by episodes, which embellish and enrich it, or by figures expressive of the circumstances which have preceded it, or by conveying its effects after completion: some we perceive engaged in relating the event to those entering, or unable to view it from their situation in the picture; others of various ages and of different sexes, while they give variety to the work, enable him to develope its effect by a variety of expression, and action, by extending the lines productive of such sensations, or lines by a union of several parts leading the eye by their direction

to the principal point of the story, or giving bulk and strength to the foreground figures. Add to these, figures repeating by their form the principal points, so as to give those richness by extending their shape, or productive of harmony by their action and expression, emanating from those of the principal actors. These remarks more immediately apply to the mental portion of the work, and of works of the highest department in the art; but many of them also may be made applicable to other branches, such as the combining of several heads for the purpose of preserving a mass of flesh colour, and to prevent spottiness in the effect; or giving pleasure to the eye, by the forms taking pleasing shapes; or assisting deception, by lines combining to give strength and magnitude to the foreground objects, or diminished delicacy to the more distant: in short, a knowledge of the higher requisites of painting is of the greatest importance in all the departments, whether in giving dignity to portraiture, such as Titian's, or to landscapes, such as his also, and those of Annibale Carrache, Salvator Rosa, or Nicolo Poussin. Towards gaining perfection in poetry, we find writers recommending this course of investigation. Addison says, "a poet should be very well versed in every thing that is noble and stately in the productions of art, whether it appears in painting or statuary; in the great works of architecture, which are in their present glory, or in the ruins of those which flourished in former ages. Such advantages as these help to open a man's thoughts, and to enlarge his imagination, and will therefore have their influence on all kinds of writing, if the author knows how to make right use of them[22]." Reynolds recom-

[22] The same remarks which Dr. Johnson applies to poetry may be here made use of to indicate the sources of instruction for those who aspire to the higher walks of painting: "By the general consent of critics, the first praise of genius is due to the writer of an epic poem, as it requires an assemblage of all the powers which are singly sufficient for other compositions. Poetry is the art of uniting pleasure with truth, by calling imagination to the help of reason. Epic poetry undertakes to teach the most important truths by the most pleasing precepts, and therefore relates some great event in the most affecting manner. History must supply the writer with the rudiments of narration, which he must improve and exalt by a nobler art, must animate

mends, " that all the inventions and thoughts of the ancients, whether conveyed to us in statues, bas reliefs, intaglios, cameos, or coins, are to be sought after and carefully studied; the genius that hovers over these venerable relics may be called the father of modern art. The collection of the thoughts of the ancients which Raffaelle made with so much trouble, is a proof of his opinion on this subject; such collections may be now made with much more ease, by means of an art scarce known in his time, I mean that of engraving; by which, at an easy rate, every man may now avail himself of the inventions of antiquity." He also recommends taking another view of the same figure, either by modelling it or setting a person in the same attitude; this will give the student a quick knowledge, wherein consists the beauty and character of the different great masters; or by altering it to suit his subject, such as the figure of St. Paul, by Masaccio, introduced in Paul preaching by Raffaelle, or the Sacrifice at Lystra, PLATE II. To conclude, I can only repeat the words of Sir Joshua Reynolds, " study, therefore, the great works of the great masters for ever, study as nearly as you can in the order, in the manner, and on the principles on which they studied. Study nature attentively, but always with those masters in your company; consider them as models which you are to imitate, and at the same time as rivals, with whom you are to contend."

by dramatic energy, and diversify by retrospection and anticipation; morality must teach him the exact bounds and different shades of vice and virtue; from policy, and the practice of life, he has to learn the discrimination of character, and the tendency of the passions, either single or combined; and physiology must supply him with illustrations and images. To put these materials to poetical use, is required an imagination capable of painting nature and realizing fiction. Nor is he yet a poet till he has attained the whole extension of his language, distinguished all the delicacies of phrase, and all the colours of words, and learned to adjust their different sounds to all the varieties of metrical modulation."—*Johnson's Life of Milton.*

## ARRANGEMENT.

Arrangement, though not partaking of that high quality which distinguishes composition, yet nevertheless embraces a knowledge of those characteristic features to be found pervading the general appearances of nature, and to be employed in giving a truth and vigour to assemblages of lines, shades, and colours. All objects whose images enter the eye are subject to certain laws, which regulate their form, and assign to them situations in the picture which such forms indicate, and which having been often observed, have obtained a general consent as to their truth and natural character. To know, therefore, these arrangements observable in nature is absolutely necessary, that we may employ such knowledge in producing the same results in painting, especially as we find the works of those artists who have thus combined their skill in arrangement give the greatest pleasure to the eye of the spectator: this gratification arises from the several images being depicted in their most characteristic features. In looking abroad upon the face of nature, for example, in a wide extent of country, where the eye can take a comprehensive observation, we notice towards the horizon a multitude of parallel lines stretching across the landscape, the lines crossing them being foreshortened lose their breadth, while the perpendicular lines of objects lose their consequence owing to their diminution from distance; but as these approach towards the foreground, we perceive that they gain their ascendancy, and become more rugged in the outline, and stronger in effect from their shadowed portions being larger and darker, owing to their nearness to the eye. Being acquainted with these facts, we can produce such an arrangement as shall have the appearance of truth, and become enabled to heighten in effect the arrangements of natural representation, and by the addition of colours, whose properties belong to near objects, by the addition of light and dark coming in contact, which gives distinctness and firmness, by the

introduction of figures and other objects, we can assist the perspective, by their assuming forms more or less under its influence, according to their situation.

We know that quietness and regularity give dignity to part of a composition while their lines contrast with others expressive of bustle, or picturesque assemblage of forms; we have noticed this exemplified in the Attila, &c., we see it also in *Fig.* 5, part of the Heliodorus, where the heads of the figures who bear the chair of the Pope surround him with

*Fig.* 5.

studied regularity, giving calmness by the arrangement, and firmness by the perspective appearance of a column upon whose base he is elevated[23].

[23] Lanzi, speaking of this work, says, "in the course of this year, 1512, Raffaelle was employed in the second chamber on the subject of Heliodorus driven from the temple by the prayers of Onias the high priest, one of the most celebrated pictures of the place. In this painting

This regularity of diminution and perspective effect has been noticed principally in the arrangement of the heads; it is also to be observed in the base lines of the several compositions of the figures, such as we observe upon this side of the Heliodorus, where the Pope enters, marking the line from the foreground to the distance, assisting the perspective by such means as to lead the eye into the depths of the composition, while it gives the appearance of truth and simplicity of natural diminution. See PLATE IV. I have given an additional PLATE IV*, part of the Dispute of the Sacrament, where this disposition is more evident. Independent of this mode of arrangement being of use in giving uniformity to irregular portions of a composition, it is of great advantage in directing the eye to the principal parts of the picture by means of the perspective appearance of the line; also by producing such arrangement either by the base of the group or the introduction of accidental objects to assist such deceptive diminution, we counteract the effects of false perspective, which the base line of the group sometimes produces; for in conducting the design, the heads and upper portions only of the composition are attended to in the

the armed vision that appears to Heliodorus scatters lightning from his hand, while the neighing steed is heard amidst the attendant thunder. In the numerous bands, some of which are plundering the riches of the temple, and in others ignorant of the surprise and terror exhibited in Heliodorus, consternation, amazement, joy, and abasement, and a host of passions are expressed. In this work, and in others of these chambers, Raffaelle (says Mengs) gave to painting all the augmentation it could receive after Michael Angelo. In this picture he introduced the portrait of Julius the Second, whose zeal and authority is represented in Onias. He appears in a litter, borne by his grooms, in the manner in which he was accustomed to repair to the Vatican to view this work." In these heads Raffaelle has given the portraits of his pupils M. Antonio and Julio Romano, with the Pope's secretary, &c. For this anachronism Raffaelle has been blamed by the critics, without considering that it was the only way the painter had of connecting the Jewish with the Christian church, and exemplifying the temples of both as the sacred depositories for those funds which were to be given out to the widow and the orphan poor. Without detracting from the great merit of Raffaelle, we may rest assured that these works were of too much importance not to be watched with the greatest vigilance, and assisted in their moral efficacy by all the learning within the walls of the Vatican. Those who wish to see how close Raffaelle often kept to the history, may examine the whole story in 2 Maccabees, chap. iii.

first instance, without reflecting how the parts which come in contact with the ground will appear when terminated according to their true position in the picture.

A knowledge of arrangement enables us yet further to heighten the gratification of the spectator, by engrafting upon the work those forms found in the compositions of the most celebrated artists. This knowledge it is which enables the poet to give so pleasing and vivid descriptions of scenery, often gratifying the imagination more than an actual survey of the scene he describes; as Addison remarks, "he takes indeed the landscape after her, but gives it more vigorous touches, heightens its beauty, and enlivens the whole piece, that the images which flow from the objects themselves appear weak and faint, in comparison of those that come from the expressions." A knowledge of arrangement enables the artist to follow up and extend lines and forms often only hinted at in nature; those parts which possess a strong local character, he preserves as leading points to an harmonious assemblage of lines; while portions possessing beauty, he enshrines in masses of repose, or surrounds them with forms and colours, which add to their effect upon the spectator. Even in the wild, rugged scenes of savage grandeur, where rocks, trees, and clouds combine in awful magnificence, a knowledge of arrangement is necessary to preserve this earthquake-like appearance. In the works of Salvator Rosa, the student will find many examples of this mode of arrangement, every part of the work uniting "in dreadful harmony." To acquire a knowledge of beautiful scenery, founded upon aerial perspective, or an agreeable assemblage of lines and forms, he ought to study the arrangements of Claude, Cuyp, and those of Turner, whose works are filled with the various qualities which constitute the true poetry of painting, and the power of giving extent and magnificence in the highest degree.

## HARMONY.

Harmony in painting is the connexion and agreement of one part with another, either as regards form, light and shade, or colour: this agreement proceeds either from a succession of the same forms in different degrees of distinctness, such as arise when we cast a stone into water, producing a succession of undulating circles, or by one form depending upon its adjoining for its completion and unity, as is the case in poetry[24]; or the harshness of isolated forms may be broken down, and harmonised with the whole, by their being hinted at, or faintly repeated in various portions of the picture.

## FORM.

Burke, speaking of beautiful forms, says, "as perfectly beautiful bodies are not composed of angular parts, so those parts never continue long in the same right line, they vary their direction every moment, and they change under the eye, by a deviation continually carrying on, but for whose beginning or end you will find it difficult to ascertain a point." All authors from Aristotle to De Quincy having treated of the affections of the mind as if the avenues to each sensation were the same, it will perhaps lead us to a more clear definition of the properties which belong to vision exclusively, by confining the observations on form, shade, or colour to

[24] Dr. Johnson says, "As harmony is the end of poetical measures, no part of the verse ought to be so separated from the rest as not to remain still more harmonious than prose, or to show, by the disposition of the tones, that it is part of a verse." Further on he remarks, "when a single syllable is cut off from the rest, it must either be united to the line with which the sense connects it, or be found alone. If it be united to the other line, it corrupts its harmony; if disjoined, it must stand alone, and with regard to music be superfluous; for there is no harmony in a single sound, because it has no proportion to another."—*Rambler*, No. 90.

their effects upon the eye. As the forms of all objects enter the eye through a circular aperture, those objects containing a similar continuity of form fall most agreeably upon the organ of vision, and are seen as it were at a single glance; while objects possessing sharp angles seem less in harmony with the flow of light which accompanies their entrance, and require repeated examinations to gain a knowledge of their exact form; for example, if a circle be presented to the eye, we are incontinently carried round the whole circumference, whereas when we look upon a square or cubical form, it requires four separate examinations, each producing a separate effort. Now as the images of all objects are not only viewed through a circular aperture, but are also received upon a circular surface, and as the rays by which such images are conveyed fade imperceptibly as they depart from the centre of vision, these may be some of the causes why circular or undulating forms fall most agreeably upon the eye; especially if we consider that the organ itself moves as it were in a circular motion, by means of its muscles, or as it is commonly termed, the ball and socket[25]. There are other reasons why circular forms

[25] "One of the many points of superiority which the eye possesses over the ordinary camera obscura is derived from its spherical shape adapting the retina to receive every portion of the images produced by refraction, which are themselves curved: whereas, had they been received on a plane surface, as they usually are in the camera obscura, a considerable portion of the image would have been indistinct. This spherical form is preserved by means of the firm membranes which protect the eye, and which are termed its *coats;* and the transparent media which they enclose, and which effect the convergence of the rays, are termed the *humours of the eye.* There are in this organ three principal coats and three humours, composing altogether what is called the *globe of the eye.* The outermost coat, which is termed the *sclerotica,* is exceedingly firm and dense, and gives to the globe of the eye the mechanical support it requires for the performance of its delicate functions; it is perforated behind by the optic nerve, which passes onward to be expanded into the retina. The sclerotica does not extend farther than about four-fifths of the globe of the eye, its place in front being supplied by a transparent convex membrane, called the *cornea,* which is more prominent than the rest of the eyeball; a line passing through the centre of the cornea and the centre of the globe of the eye is called the *axis* of the eye. The sclerotica is lined internally by the *choroid coat,* which is chiefly made up of a tissue of blood vessels for supplying nourishment to the eye. It has on its inner surface a layer of a dark coloured viscid

are most agreeable to the eye, arising from an association of ideas, such as the soft circular forms of children and youth, compared with the rigid and angular forms of age: or flowing undulating lines, conveying a greater idea of motion than lines crossing each other in abrupt opposite directions. Harmony consisting of a certain proportion of one part with another, no figure or shape can be harmonious or agreeable unless this arrangement is complete, so as to produce a unity to the eye, or a balance of one portion with another, such as the preponderance of perpendicular lines being counteracted by those running in a horizontal direction, or oblique lines antagonized by opposite obliquities, convex by the presence of concave,

secretion, known by the name of the *pigmentum nigrum*, or black pigment. Its use is to absorb all the light which may happen to be irregularly scattered through the eye, in consequence of reflection from different quarters; and it serves, therefore, the same purpose as the black paint with which the inside of optical instruments, such as telescopes, microscopes, and cameræ obscuræ, are darkened. Within the pigmentum nigrum, and almost in immediate contact with it, the *retina* is expanded, forming an exceedingly thin and delicate layer of nervous matter, supported by a fine membrane. More than three-fourths of the globe of the eye are filled with the *vitreous humour*, which has the appearance of a pellucid and elastic jelly, contained in an exceedingly delicate texture of cellular substance. The *crystalline humour*, which has the shape of a double convex lens, is formed of a denser material than any of the other humours, and occupies the fore part of the globe of the eye, immediately in front of the vitreous humour, which is there hollowed to receive it. The space which intervenes between the lens and the cornea is filled with a watery secretion, called the *aqueous humour*. This space is divided into an anterior and posterior chamber by a flat circular partition, termed the *iris*. The iris has a central perforation, called the *pupil*, and it is fixed to the edge of the choroid coat by a white elastic ring, called the *ciliary ligament*. The posterior surface of the iris is called the *uvea*, and is lined with a dark brown pigment. The structure of the iris is very peculiar, being composed of two layers of contractile fibres; the one forming concentric circles, the other disposed like radii, between the outer and inner margin. When the former act, the pupil is contracted; when the latter act, the breadth of the iris is diminished, and the pupil of course is dilated. By varying the size of the pupil, the quantity of light admitted into the interior of the eye is regulated and accommodated to the sensibility of the *retina*. When the intensity of the light would be injurious to that highly delicate organ, the pupil is instantly contracted, so as to exclude the greater portion; and on the contrary, when the light is too feeble it is dilated, in order to admit as large a quantity as possible The iris also serves to intercept such rays as would have fallen on parts of the crystalline lens less fitted to produce their regular refraction."—*Dr. Roget's Bridgewater Treatise.*

all mingling together in regular adjustment: as in music we find harmony produced by a combination of sounds different in themselves, yet affecting the mind, through the medium of the ear, with one result. Aristotle, in his Treatise on Poetry, says, "beauty consists in magnitude and order; but no animal, or other thing, can be beautiful that is either too small or too large for the eye to take cognizance of its several component parts at once, as in that case the whole, or unity, is lost to the spectator." That extension of form so conducive to harmony, and productive of an agreeable effect upon the eye, is often taken advantage of in regulating the boundary line to a composition; thus we often see a single head of a child, or a group consisting of an assemblage of curved lines, reach the eye more agreeably through a circular frame, as in that case the sensations which arise from such a combination are not disturbed or interrupted; so, likewise, the sight may be conveyed with greater pleasure, and with an increased perspective effect, through a square or oblong aperture, by having the horizontal and perpendicular lines of the frame repeated as they depart from the eye, in diminished lengths, and strengths, and magnitude, as in PLATE V, also in the curved and horizontal lines of the architecture of the School of Athens, the Heliodorus, &c. This mixing up the frame or opening with the work is often of the utmost importance, even when extended to the effect of light and shade, and colour, as it breaks down that harshness which otherwise attracts the eye, while examining the work contained within it[26].

[26] This harmonious combination of the picture with its frame induces many artists to finish their works after being framed, thereby assisting them in giving a greater force and deceptive appearance to the whole; for though this deceptive appearance is argued against by some, as belonging only to the infancy of the art, and not applicable to the higher walks of painting, yet the mind cannot be reached through the medium of the eye unless this deception is carried out to a considerable extent; neither, as others reason more subtly, is it to be regarded as a diminution of our gratification. Dioramas and panoramas are both pleasing illusions, on this principle alone. De Quincy says, "When the painter includes within a narrow compass a vast extent of space, when on a flat surface he bears me through the far off regions of the infinite, and makes the air

## CHIARO OSCURO.

That harmony which is produced by chiaro oscuro, or by the means of black and white, independent of colour, depends upon the quantities of light and dark employed, and the disposition of them; sometimes meeting in extremes of opposition, in other portions gliding away with imperceptible softness into undefined spaces, the light sometimes falling on combined objects, giving out a faint halo round the group; in some instances darting out through the dark masses of shadow in sharp defined shapes, creating by their whole arrangement that mixture of harsh and tender gradations observable in nature. The power of producing a variety of pleasing sensations upon the eye mainly rests on the conduct of the chiaro oscuro; objects are rendered either strong or delicate, according as they advance or retire on the perspective plane of the picture; parts are forced upon the spectator's attention, by their clear defined character, and assisted from contrast by groups of indistinct images imbued with the properties of middle tint. The quantities of dark that are to be allowed to interrupt or pass within the boundaries of the masses of light, or the size of those portions of light which are found within the dominion of shade, either giving depth to it by contrast, or destroying its preponderance by producing a union with the light, are entirely at the guidance of the artist, whose skill is shown in the management of this difficult department, it being entirely under the influence of an educated eye: neither am I aware that its beauty is felt, unless by those whose tastes are refined by long contemplation of the finest works of those who have

and light appear to circulate around forms devoid of relief, I find delight in abandoning myself to his illusions. But, nevertheless, I would not have the frame absent; *I would wish to know that what I see is in fact but a piece of canvass on a perfectly plane surface.*"—*Essay on Imitation in the Fine Arts*, chap. xiv.

excelled in the different branches of painting. We know, as is the case in music, though the ear is capable of acquiring a knowledge of twenty thousand simple sounds, all differing in tone and strength[27], yet this power of distinction is not entirely in the construction of the organ, but arises from long observation. Sir Charles Bell says, "that this variety of sensation does not entirely depend upon the structure, but is the operation of the sense and intellect conjointly, appears from the long experience which is requisite to give this perfection. Nature is bountiful in providing the means of simple and acquired perception, but the latter is the result of long experience and continued effort, though we have lost the feeling of its being a voluntary effort." We have already noticed some of the most evident properties belonging to the application of shadow, by which we can easily perceive, that a mere outline of a group of figures, or a variety of objects, lies like a map under the eye; but by the judicious application of shadow passing amongst the several forms, they rise up, and assume their various situations according to their relative distances from the eye of the spectator. We can easily carry our imagination further, and assign a reason why some portions are to be subdued, and others brought into notice; but the art of combining the whole, in an harmonious mass of chiaro oscuro, can be acquired only by long investigation into the principles of those who have excelled in this captivating and imaginative art. Before entering into an examination of this quality, so productive of pleasure, viewing its effects in painting, it will be necessary to examine its cause, and where it exists in natural imagery, the only sure source on which we can build with certainty. When we direct our eyes to any particular object, we observe it distinctly defined, while the surrounding objects produce a fainter impression on the retina; we also perceive, on examination, that we often have been attending to the impression made upon one eye only, either from its more favourable position, or from a superior goodness in the organ itself; nevertheless, a number of lateral

[27] Reid's Inquiry into the Human Mind, p. 98.

images are indistinctly hinted at upon the retina of the other, which, by their softness, give a precision to the object of our attention, from contrast, and amuse and assist the imagination from a variety of circumstances; we know, also, that there are two representations, one painted in each eye, and though they form but one in the mind, yet we cannot shut out entirely those hints which may be conveyed to the fancy from the faintest impressions unconsciously attended to; add to which, the eye, from fatigue in looking at any object attentively, naturally turns for repose to soft masses of shadow and indistinctness. Without following up this subject too minutely, these may be some of the reasons why particular arrangements of chiaro oscuro please the eye more than others[28]. We also find, that along with indistinctness, a repetition of form, and a completeness or unity of shape, are very much under its influence, as may be observed by trying an experiment as noticed in note 29[29], which will suggest others to the imagination. But whatever way the student takes to get an insight into this great charm of painting, either in arranging his composition so as to suit any particular effect of light and shade, or in trying various means of

[28] This indistinctness also pleases the eye of the spectator, in the same way in which an unfinished sketch gratifies his imagination; for as every one has different notions of beauty of form, he is left to fill up the images, and shape them to his own taste: it also pleases the mind, as it gives a sort of creative power, such as is felt when looking upon a discoloured wall, or into the dying embers of a fire. Burke even considers it conducive to sublimity; he says, "even in painting, a judicious obscurity in some things contributes to the effect of the picture, because the images in painting are exactly similar to those in nature; and in nature, dark, confused, uncertain images have a greater power on the fancy to form the grander passions than those have which are more clear and determinate."—*Essay on the Sublime and Beautiful.*

[29] If we take a pen and sketch in a row of buildings, trees, &c. running from one side to a point of sight in the centre, blotting in shadows broad and dark on the near objects, and while the ink is wet fold the paper across the point of sight, so as to take off an impression on the opposite side, the eye is not only gratified by a greater mixture of sharp and soft portions, but by a greater unity, and balance of parts, one side with another, and a repetition of the sky line with the lines of the ground; or if we draw in a group of trees and fold the paper across at the base of their stems, so as take off a faint impression, as if reflected in water, the same agreeable sensation will be produced.

distributing light and shade over his design, let him carefully watch, both in nature and in art, its various combinations, and endeavour to find out the latent cause of its beauty. As the etchings of Rembrandt embrace this quality in the highest degree, from a mere outline to the most extensive depth of shadow, they ought to be constantly before him when he has it in his power; they ought to be viewed in every direction, to enable the eye to get acquainted with the proportions of light, dark, and half tint: he ought also to engraft the scheme of chiaro oscuro on designs of his own, that the harmony which exists in these wonderful productions may be transferred, if possible, into new inventions, as in PLATE VI.

## HARMONY OF COLOUR.

THE power of combining sounds whose united influence shall call into existence, through the medium of the ear, those latent seeds by which the violent or tender passions are excited, is too well understood to require explanation. That there exists the same sources of enjoyment in the human mind, which are capable of being awakened through the medium of the eye, is equally certain; otherwise, the painter could not produce, by a combination of colour, those effects which surprise or delight the spectator. Locke describes colours as only ideas of the mind apprehended by the imagination, and not qualities that have any existence in matter. Newton says, colours have their origin in the different refrangibility of the rays of light, and are not received from reflections or refractions from natural bodies. Without, however, entering too minutely into the philosophy of colours, it will be necessary to inquire what are the colours which affect the eye most, or from what arrangement harmony arises. We observe that children and rude nations[30] are most attracted

[30] "It is evident that gay colours of all kinds are a principal source of pleasure to young children, and they seem to strike them more particularly when mixed together in various ways. Whether there be any thing in colours which corresponds to the harmony of sound may be doubted;

by strong colours, from the excitement which they produce. De la Hire says, "the different degrees of excitement produced by colours may be observed by keeping the eye shut, after looking at the sun or any luminous object, for the image left upon the retina will be first red, then yellow, then green, and last of all blue." We also perceive that the effect produced by strong colours may be increased or diminished, by bringing them in contact with others of an opposite hue; large portions of strong blue coming in contact with red or white (for we find the ground colour often a great cause of opposition) affect the eye in a different manner from what the same colours produce when in smaller quantities; or on a ground of a neutral tint, such as we see in the specimens found in the Egyptian tombs, contrasted with the same colours distributed over a Persian shawl: in the latter case, the rays coming to the eye from every separate colour, cross each other, so as to produce an agreeable harmony[31]. In the former case, one colour makes too strong an impression on the eye to be obliterated easily; impressions remaining of long or short duration,

if there be, it must however admit of much greater latitude than the harmony between sounds, since all mixtures and degrees of colour, unless when the quantity of light overpowers the eye, are pleasant: however one colour may be more so originally than another. Black appears to be originally disagreeable to the eyes of children; it becomes disagreeable also very early from associated influences. In adults, the pleasures of mere colours are very languid, in comparison of their present aggregates of pleasure formed by association. However, the original pleasures of mere colours remain in a small degree to the last, and those transfused upon them by association with other pleasures (for the influence is reciprocal without limits) is a considerable one,—so that our intellectual pleasures are not only at first generated, but afterwards supported and resuscitated in part from the pleasures affecting the eye, which holds particularly in respect of the pleasures afforded by the beauties of nature, and by the imitation of these which the arts of painting and poetry furnish us with."—*Hartley on Man, Sense of Sight.*

[31] Sir Isaac Newton remarks, that when the refrangibility of any particular ray produced a certain colour, he found it impossible to change that colour, if sufficiently large; he could subdue its intensity, by intercepting its rays by coloured mediums, but could not change it in *specie.* (We find this, which is a kind of glazing, was even practised by the ancients.) He found a transmutation of colours might be made by a mixture of different kinds of rays, but in such mixtures the component colours themselves do not appear, but by their mutually allaying each

Fig. 2

Fig. 1 Plate 6

Fig. 3

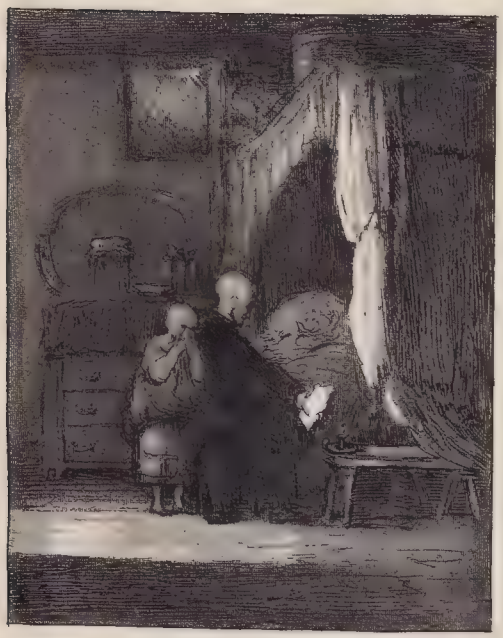

Fig. 4

Etched by J. Burnet

London. Published Feb.y 1837. by J. Carpenter. Old Bond Street

according to the intensity of light or brightness of the object producing them. Reynolds mentions three modes of harmony existing in the arrangement of colours; one where the colours are of a full and strong body, such as we find in the works of Raffaelle, and which he denominates the Roman manner; another the Bologna style, which mixes several colours together, so as to produce a general union in the whole, without reminding you of the original colours of which they are composed, and which is carried to the greatest perfection in the small works of the Dutch school; the third is the Venetian, where the brightest colours are admitted, with the two extremes of warm and cold hues, and the whole reconciled and harmonised by being dispersed over the picture, presenting to the eye that sensation arising from a bunch of flowers. Each method seems to have its peculiar province allotted to it, corresponding to the subject or style of composition, in the design, and chiaro oscuro, according as they depart more or less from common representations of nature, or retain an entireness or severity of outline: harmony arising from a corresponding agreement of the several parts, we can easily imagine a suitableness in the colouring to preserve such unity. In the early stages of painting, when the figures possessed a dry continuous outline, we find the colours laid in strong and bright, so as to give relief unconnected with the effect of aërial perspective. As the art advanced, we find colours made use of in the character of chiaro oscuro; and when foreshortening and perspective effect occupied a large share in the conduct of the work, we perceive that colour became more subordinate, and the outline, light and shade, and colour, assimilated with each other in producing an effect upon the spectator, arising from neither having a preponderance in claiming his

other, constitute a middle colour; and therefore if, by refraction, the different rays be separated, colours will emerge different from that of the composition. Thus blue and yellow powders finely mixed appear green to the naked eye, and yet the colours of the component particles are not thereby really changed, but only blended; for when they are viewed with a microscope, they still appear blue and yellow.—*Priestley's Remarks on Newton's Optics.*

attention. In entering upon a diffuse examination of the foregoing remarks, each separate division would require a lengthened essay to particularise the way in which the eye receives delight from the various modifications of colour: a work of this brief description can do little more than point out where the various examples are to be met with, and how they are modified and arranged to harmonise with those sensations which exist in the mind, and cannot be altered or diverted into other channels by the caprice or false taste of any one. I would fain hope I have gone further: I have endeavoured to prove, that those sources of enjoyment which lie dormant in the human mind, and which through the sense of sight are vivified and called into operation, can only, by the cultivation of that sense, be productive of pleasure[32]. I have also endeavoured to prove the great utility of the education of the eye, as a means of general instruction, giving employment to thousands, while it opens those avenues to science, which even to the great power of language remain as " books sealed and fountains shut up."

## STUDYING FROM NATURE.

Objects drawn from nature possess a very characteristic difference from those drawn from the combinations of fancy, or from those images presented to the imagination. We find in sketches from nature many minute circumstances, a truth and precision, a variety and beauty, that

[32] Addison remarks, that a man of polite imagination is let into a great many pleasures that the vulgar are not capable of receiving. He can converse with a picture, and find an agreeable companion in a statue. He meets with a secret refreshment in a description, and often feels a greater satisfaction in the prospect of fields and meadows than another does in the possession. It gives him, indeed, a kind of property in every thing he sees, and makes the most rude uncultivated parts of nature administer to his pleasures: so that he looks upon the world as it were in another light, and discovers in it a multitude of charms that conceal themselves from the generality of mankind.—*Spectator*, No. 411.

objects drawn from memory, or those images under the guidance of the mind only, have no pretension to; the latter possess the general appearance merely like the confused character of nature presented to indistinct vision; or if made out with detail, the minutiæ contain a select set of touches or forms, become agreeable from habit, which constitutes mannerism; such imperfections can be avoided only by having accustomed the eye in the first instance to a scrupulous exactness in delineating objects from nature, as one or two parts left out may destroy the richness and variety of lines, and an unequal proportion of the forms may deprive the copy of the truth and beauty of the original. These peculiarities are also to be examined and contemplated upon, that this character may be engrafted upon works of imagination. Reynolds says, "I very much doubt whether a habit of drawing correctly what we see will not give a proportionable power of drawing what we imagine."

To educate the eye to accomplish this, it is necessary, in the first instance, to select such objects as are simple in their forms, that the eye may perceive them distinctly, and make them gradually give place to others more complicated, to fit the eye and the hand to a variety of lines. It is also of the first importance that the drawings be made sufficiently large, that an opportunity may be given for filling up the various spaces with the minute parts, and also to prevent the hand acquiring a cramped, or little manner of drawing: it is also of equal importance, that the object chosen for representation be such as can be compared with the original, to test the exactness of the copy; much injury and fallacy has arisen from not attending early to a proper mode of study; how often, for example, do we perceive in those who draw landscapes the incapability of drawing the human figure with any degree of correctness; this arises entirely from careless drawing in the first instance. A tree may be imperfectly drawn, yet look sufficiently true to please most spectators; but the human figure possesses proportions, the want of which can be easily detected; but had we an opportunity of comparing the tree with

the original in nature, we should discover the resemblance to be equally imperfect; for an eye capable of drawing correctly, can draw any object presented to it, whether simple or complicated. Educating the eye in the first instance in the elements of lineal and aërial perspective, gives it a clearer insight into the causes of the changes of form and shadow, observable in all objects; while drawing from the objects themselves in place of copies, gives it a power of perception[33], and a knowledge of embodying forms in composition, quite unattainable by any other method. When we consider that the images of objects dwell upon the retina only while the eye is directed to them, and, like the pictures on the table of the camera obscura, instantaneously vanish when we turn to something else, we may perceive the necessity of keeping each several part sufficiently long under examination before delineating it, that the mind may be put in possession of its form and colour, so as to retain it in the memory not only while copying it, but with such an impression as will improve and enrich the imagination with a multiplicity of imagery. Those who advocate the study of nature, without educating the eye in the first instance, are not aware that it is the superficies of things only which present themselves to the outward vision, and without a monitor to direct, the art would always be in its infancy[34]. A tree drawn by a beginner

[33] Dr. Jurin observes, that the eye, as well as other parts of the frame, acquires strength and perfection from frequent use of the muscles, as is noticed in the eyes of sportsmen, travellers, sailors, &c., who see better at long distances; while those whose professions lead them to close examination, see better at small distances: but drawing from nature, especially distant prospects, perfects the eye in both these extremes, as we have to carry the vision to examine objects far off, and immediately transfer it to a near examination on the paper close to the eye, for this organ is wonderfully provided with the means of changing the crystalline lens, both for pushing it forward from the retina, and rendering it more convex when viewing near objects; and also for drawing it more within the vitreous humour and rendering it flatter when examining distant objects.—See *Dr. Jurin on Distinct Vision*, and *Potterfield on the Eye.*

[34] " Cicero remarks, that not to know what has been transacted in former times, is to continue always a child. If no use is made of the labours of past ages, the world must remain always in the

represents a flat image, like a plant or a piece of sea weed dried between the leaves of a book; a figure represents but the section of one, for even if the foreshortened portions were perceived, he is incapable of giving them the perspective appearance, or lifting it from the ground by means of the application of light and shade. The first restorers of the art in Italy advanced but little beyond the flat brasses that supplied them with the means of design: even in the hands of Giotto and Massaccio foreshortening was but little attended to, and then from a want of light and shade to give the parts their relative situations, looked cramped and feeble; it was not till the master minds of Leonardo da Vinci and Michael Angelo grappled with the subject that difficulties disappeared; those portions of the figure were no longer represented in profile views, but advanced or receded from the spectator, and whole groups, in place of looking like a continuous frieze, were turned round, and sunk in the depths of the composition by means of lineal and aërial perspective. Raffaelle, by taking advantage of the works of those who had preceded him, carried the art to a state of perfection, which the study of nature, notwithstanding his constant application to her, never could have enabled him to achieve; the contemplation of the fine works of antiquity created elevated visions of ideal composition, while his constant application to nature for the details enabled him to give a reality and identity to the creations of his imagination. Without the eye being made acquainted with the beauties of those who have advanced the art to its present state, either progressively, by studying the best works, or by commencing a course of drawing from antique sculpture, it will be impossible to select what is beautiful in nature, or be able to choose one point of view more interesting than another. It will also be impossible to combine a variety of objects,

infancy of knowledge. The discoveries of every man must terminate in his own advantage, and the studies of every age be employed on questions which the past generation had discussed and determined. We may with as little reproach borrow science as manufactures from our ancestors; and it as rational to live in caves till our own hands have erected a palace, as to reject all knowledge of architecture, which our understandings will not supply."—*Dr. Johnson.*

unless we have a knowledge of those principles upon which the various works are constructed that have given satisfaction; for though, as is the case with music, the varieties are endless, yet the science is simple, and to be perceived by those who investigate the arrangements of harmony. He who attempts to study from nature unassisted by education in the first instance, will find himself often mistaken in his results; neither will he arrive at so certain, or so expeditious a method of delineating objects with truth and feeling, as he will be continually in dread of falling into error. Leonardo da Vinci says, " theory is the great director of experiment, the only interpreter of the works of nature which is never wrong; it is our judgement which is sometimes deceived, because we are expecting results which experiment refuses to give; we must consult experiment, and vary the circumstances till we have deduced general rules, for it alone can furnish us with them; and general rules direct us in our inquiries into nature, and the operations of art; they keep us from deceiving ourselves and others, by promising ourselves results which we can never obtain."

This is the experience which enables the artist to select and combine, to leave out or add to the various appearances presented to his eye. Why is it, for example, that the portrait painter, when his sitter is placed before him, turns the head, first to one side, then to the other, and contemplates it also under a variety of effects of light and shade? It is to observe the best arrangement of the features, to select that view of the head, which developes the greatest character, and the most beautiful points. To enable the eye to make these selections, it is necessary to combine with the study of nature the study of the works of those eminent men who have preceded us. The works of Titian will convince the student how much quiet grandeur is to be produced by simplicity and breadth; the works of Vandyke exemplify the art of arrangement, and a beautiful distribution of the features, also the art of uniting the several parts by means of light and shade, or disposition of the hair, or subordinate accessories. This power of planning out or adjusting the several parts to

the best advantage may be acquired by long contemplation of the various combinations observed in nature; but a reference to the etchings by Vandyke, and the prints after him, will facilitate the student in his inquiries. We know that Rubens advised Vandyke and Velasquez to study the works of Titian as the best means of arriving at perfection in portrait painting; and so uniform has been this mode of acquiring correct knowledge, that the works of Reynolds or of Lawrence may be studied as the best means of shortening labour, these artists having adopted the principles existing in the works of their great predecessors, so as to suit the fashion and taste of their own times, but along with such study bringing their own genius to the incessant contemplation of nature: for, as Bacon observes, "to spend too much time in studies, is sloth; to use them too much for ornament, is affectation; to make judgement wholly by their rules is the humour of a scholar, they perfect nature, and are perfected by experience; for natural abilities are like natural plants, that need pruning by study, and studies themselves do give forth directions too much at large, except they be bounded in by experience."

The art of studying from nature may be therefore considered as implying that which we perceive through the medium of our own eyes, and those things made apparent through the spectacles of other men; for seeing nature does not merely mean seeing the exact length and breadth of any object, but means the power of discerning her beauties and defects, those portions which are to be preserved, and the mode of heightening their effect upon the eye of the spectator, and the several parts which operate detrimentally to the general arrangement of the whole, which are to be intercepted by other objects, or left out entirely[35]. For, as the accidental

[35] Nothing can be so unphilosophical as a supposition that we can form any idea of beauty or excellence out of or beyond nature, which is and must be the fountain-head from whence all our ideas must be derived. This being acknowledged, it must follow of course, that all the rules which this theory, or any other teaches, can be no more than teaching the art of *seeing* nature. The

combinations of nature are thrown together uncontrolled by the likings or dislikings of any one, the greatest study is necessary, so as to form a complete work, which shall possess all the appearance of chance combined with the most skilful adjustment: for example, what a variety of appearances do not the effects of light and shade produce upon the same scene, viewed at various times of the day, or seen under the advantages or disadvantages of accidental arrangements of objects; this power of discernment is therefore to be acquired by the study of the works of those who have excelled in the different departments of the art, and afterwards perfected in searching out and contemplating the beautiful combinations which lie scattered in the endless varieties of nature: this mode of study alone can enable one artist to surpass another in the power of selection; and the same scene, bald and ineffective in the hands of one, may be rendered full and of rich effect by another, who has watched a more favourable arrangement, and who has followed up and completed the various hints derived from accidental combinations, as in PLATE VII. *Fig.* 1 and 2.

Thus the study of nature is conducive to perfect the education of the

rules of art are formed on the various works of those who have studied nature most successfully; by this advantage, of observing the various manners in which various minds have contemplated her works, the artist enlarges his own views, and is taught to look for and see what otherwise would have escaped his observation. It is to be remarked, that there are two modes of imitating nature; one of which refers for its truth to the sensations of the mind, and the other to the eye. Some schools, such as the Roman and Florentine, appear to have addressed themselves principally to the mind; others solely to the eye, such as the Venetian, in the instances of Paul Veronese and Tintoret; others, again, have endeavoured to unite both, by joining the elegance and grace of ornament with the strength and vigour of design; such are the schools of Bologna and Parma. All these schools are equally to be considered as followers of nature. He who produces a work analogous to the mind or imagination of man is as natural a painter as he whose works are calculated to delight the eye; the works of Michael Angelo or Julio Romano, in this sense, may be said to be as natural as those of the Dutch painters.—*Reynolds's Notes upon Fresnoy's Art of Painting.*

eye, by careful investigation of her works ourselves, and by being able to comprehend and appreciate the works of those who have most successfully studied her; and this not in a lukewarm or superficial manner, but with that noble enthusiasm which stimulated the genius of Michael Angelo through a long life, and even, when deprived of the power of vision from old age, made him order his attendants to convey him to the gardens of the Medici, that he might feel and pass over with his hands the glorious remains of Grecian art, on whose statues he had founded his own education.

FINIS.

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